

STANDARDS DEVELOPMENT BRANCH OMOE



36936000004657

# ONTARIO MINISTRY OF THE ENVIRONMENT

WASTE MANAGEMENT BRANCH

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## Old Waste Disposal Site Studies Phase II , Part I , Preliminary Investigation

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CENTRAL REGION

## FINAL REPORT

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TD  
897.5 RISON BEATTY LIMITED  
.043  
C46 : & STORRIE LIMITED  
1980  
vol 2  
MOE

## VOLUME 2

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TD  
897.5  
.043  
C46  
1980  
vol 2

Old waste disposal site studies :  
central region.  
76890

70  
897.5  
210°  
1.16

REGION OF HALTON

|      |                           |
|------|---------------------------|
| 7045 | CONC. 6, LOT 2, MILTON    |
| 7048 | OAKVILLE                  |
| 7054 | BAYVIEW PARK, BURLINGTON  |
| 7055 | KERN'S ROAD, BURLINGTON   |
| 7059 | MCNABB STREET, GEORGETOWN |
| 7060 | MAIN STREET, GEORGETOWN   |
| 7062 | ACTON                     |
|      | BRIAN BEST PARK, MILTON   |



Ministry  
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Ontario

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7045

Location..... CONC. 6, LOT 2,  
MILTON  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7045

LOCATION

Concession 6, Lot 2

Halton (Milton)

## Background

### Waste Disposal Practices

- Town of Milton and surrounding Township used this site for a number of years; dates unknown.
- The wastes are of domestic and rural origin including some rubble.
- The site is less than  $\frac{1}{2}$  hectare in size.
- Information source was Mr. Sweetman.

### Land Uses

#### Original

- Former ravine which was part of the drainage system to Oakville Creek.

### Present Development

#### On - site

- Vacant, open space.
- Some newly planted coniferous trees.

#### Abutting

- North - Sweetman's orchard and garden.
- West - Oakville Creek and flood plain.
- East - Sixth Line Halton.
- South - Private residence and stables.

### Present Site Owner

- Mr. Sweetman, Concession 6, Lot 2, Halton.

## Hydrogeologic Setting

### Geology

- regionally, the area is blanketed with silty clay till (Halton) overlying Queenston shale

### Regional Drainage

- within Oakville Creek watershed
- most upland drainage is diverted around the site in nearby swales

## Disposal Site Detail

### Fill Characteristics

- waste was end-dumped into a ravine on the valley slope of Oakville Creek; about 2-3 m of fill cover was placed on top
- the site is vegetated with native weeds and grasses; a grid of coniferous trees have also been planted on the site

### Topography and Drainage

- the surface of the fill has been graded with a slight slope toward the creek (west); the fill embankment is about 15 m high, at a slope of about 2:1
- drainage on the site is excellent

M-141279

## Identified Impact

### Settlement & Erosion

- there has been some erosion on the fill embankment
- there was rubble, glass etc uncovered in erosion gullies

### Vegetation Stress

- the coniferous trees showed signs of stress, however, the grass cover did not show the normal signs of stress due to landfill gas

### Leachate

- no leachate seepages were observed
- there appears to be sufficient attenuation distance between the landfill site and the river
- water quality has not been affected in Oakville Creek

### Methane Gas

- methane was not detected in three barholes on the fill site

## Potential Impacts

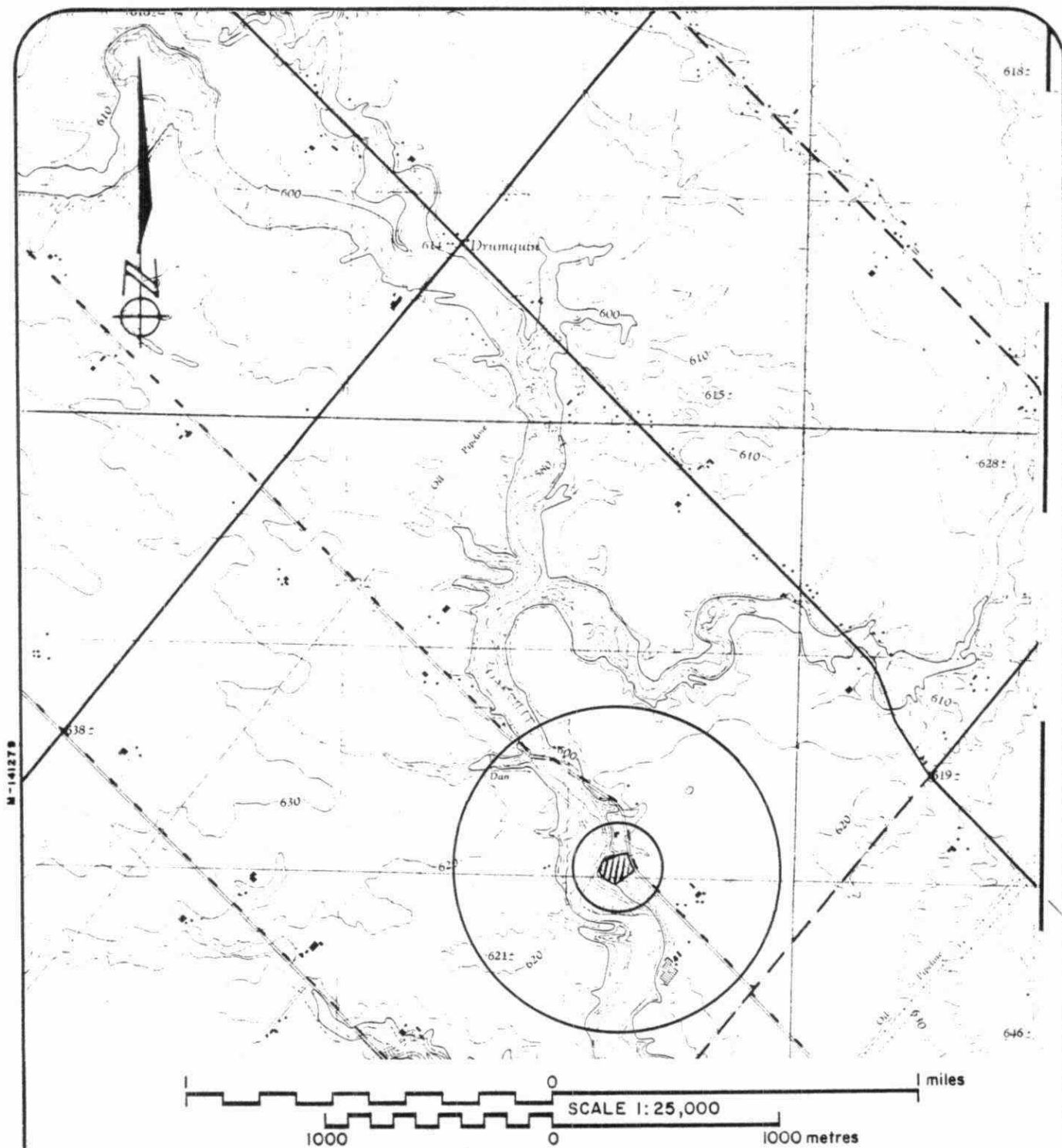
- the hydrogeologic setting and isolation from nearby homes suggests potential methane or leachate impacts will be insignificant.

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses.
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

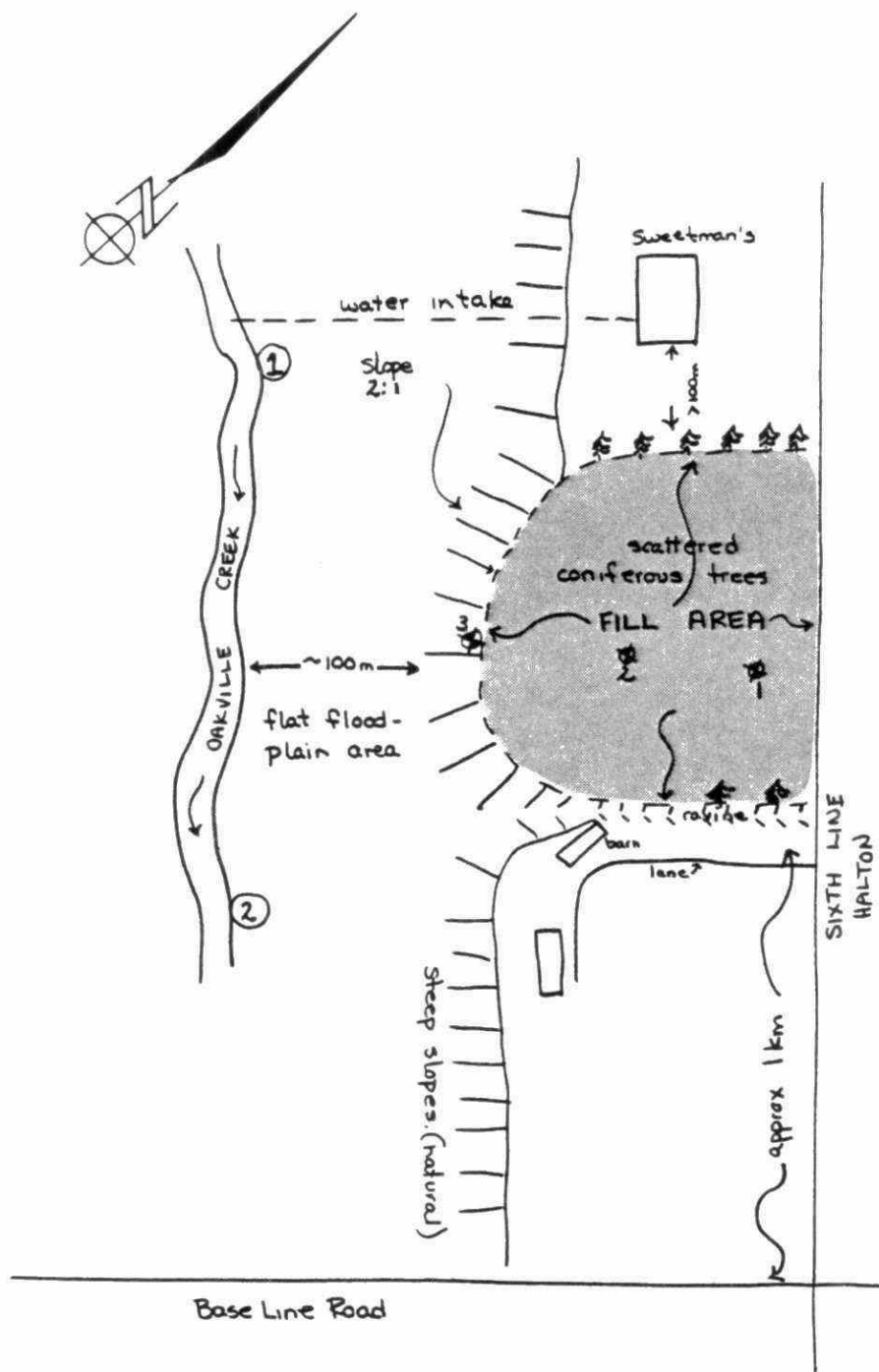
M-141279





SITE NO. 7045

Morrison Beatty Limited  
Gore & Storrie Limited



LEGEND

|                        |                                                                                       |
|------------------------|---------------------------------------------------------------------------------------|
| WASTE DISPOSAL SITE    |  |
| WATER SAMPLE LOCATIONS | ①                                                                                     |
| GAS SAMPLE LOCATIONS   |                                                                                       |
| - in field             | ⊗ 2                                                                                   |
| - in buildings         | x 2                                                                                   |

NOT TO SCALE

SITE NO. 7045  
MILTON

Morrison Beatty Limited  
Gore & Storrie Limited



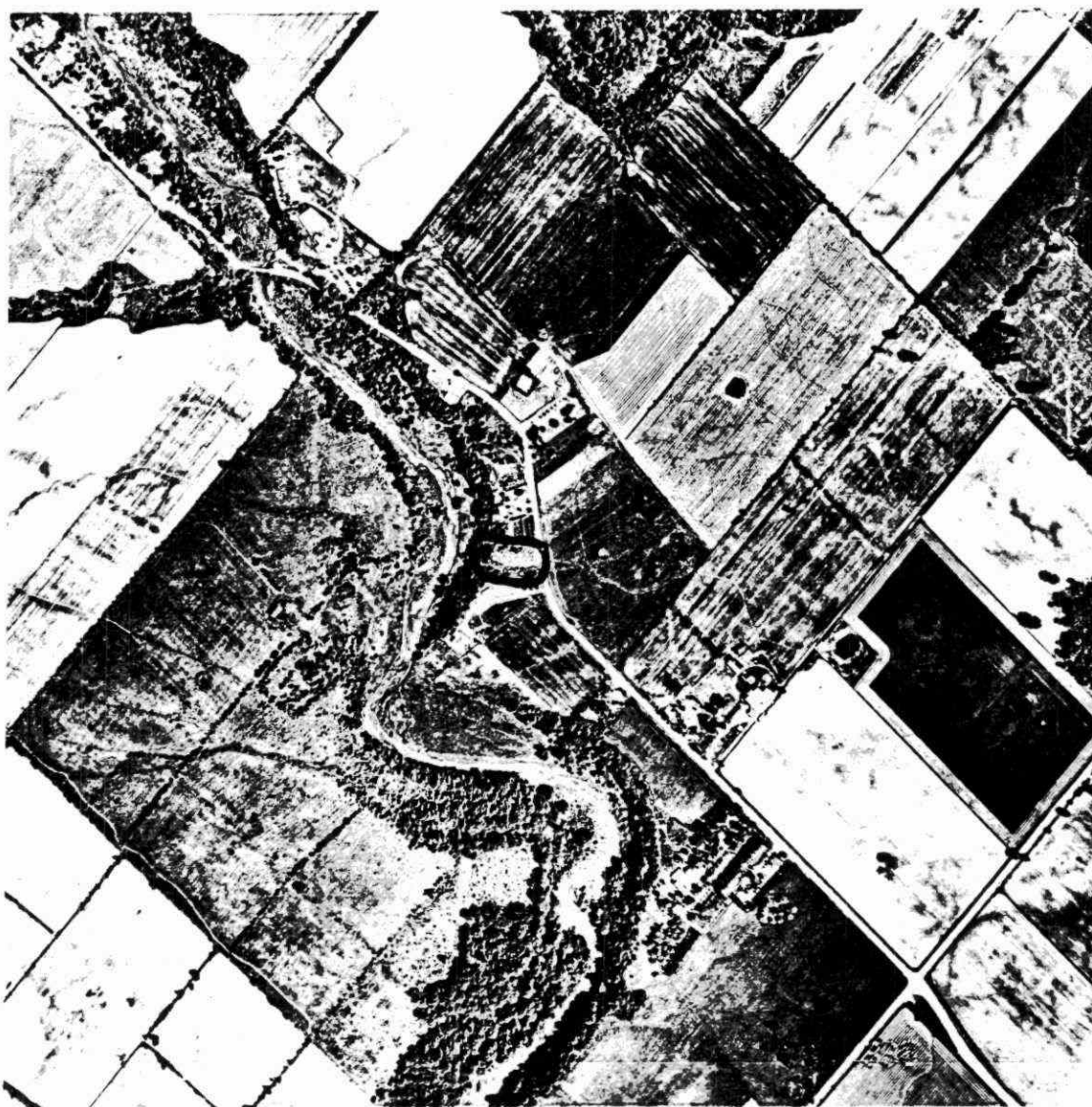
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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7045



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:10,000





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 2, 1980 SITE IDENTIFICATION CODE 7045

SITE Con. VI, Lot 2, Halton (Milton)  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

|                            | 1    | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|------|------|---|---|---|---|---|---|---|----|
| 1) Chlorides               | 91.5 | 91.5 |   |   |   |   |   |   |   |    |
| 2) pH                      | 7    | 7    |   |   |   |   |   |   |   |    |
| 3) Iron                    | 08   | 06   |   |   |   |   |   |   |   |    |
| 4) Alkalinity              | 205  | 205  |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 400  | 380  |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES 2 Litre Sample Taken

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No X Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes X No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS NONE

| Test  | Results | Test  | Results | Name/Address | Results | Name/Address | Results |
|-------|---------|-------|---------|--------------|---------|--------------|---------|
| Holes |         | Holes |         |              |         |              |         |
| #1    | 0%      | #6    |         | 1.           |         | 6.           |         |
| #2    | 0%      | #7    |         | 2.           |         | 7.           |         |
| #3    | 0%      | #8    |         | 3.           |         | 8.           |         |
| #4    |         | #9    |         | 4.           |         | 9.           |         |
| #5    |         | #10   |         | 5.           |         | 10.          |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7048

Location..... OAKVILLE  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited





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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7048

LOCATION Sixteen  
Mile Creek (Oakville  
Creek), Oakville

## Background

### Waste Disposal Practices

- Operated in the 1940's through to the early 1960's by the Town of Oakville. The site was closed in the mid 1960's.
- The Fire Station and Centennial buildings were built adjacent to the site in 1967.
- The Red Cross building was built in 1964 and one of the employees stated that the dump was operating at the time.
- The site is approximately 4 hectares in size at about 15 to 18 metres deep.
- The main waste source was domestic in origin.

### Land Uses

#### Original

- The site was formerly marshland much the same as it presently exists upstream from the study area.

### Present Development

#### On - site

- Tennis courts and paved parking lots.
- Marina and Oakville Power Boat Clubhouse.
- Busby Park.
- Randal and Navy Streets.
- Part of Oakville Centennial Pool Building.

#### Abutting

- |              |                                                                                                                      |
|--------------|----------------------------------------------------------------------------------------------------------------------|
| North & West | - Oakville Creek.                                                                                                    |
| East         | - Oakville's Fire Department, Centennial building, swimming pool and library, including their adjacent parking lots. |
|              | - Randal Street and Navy Street.                                                                                     |
| South        | - Lakeshore Road.                                                                                                    |

### Present Site Owner

- City of Oakville.

## Hydrogeologic Setting

### Geology

- regionally, the area is underlain by grey shale of the Georgian Bay Formation; the formation is exposed in outcrops near the landfill site, along cliffs of Oakville Creek
- locally, the shale is overlain by thin Lake Iroquois deposits of sand; beneath the site there are likely floodplain deposits of silt, sand and gravel

### Regional Drainage

- the landfill is on the inside of a meander in Oakville Creek; the base of the site was primarily swamp land
- the upland areas east of the site are serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the landfill has been landscaped and contoured into a natural landform; the north end of the fill is about 10 m in depth
- the entire site is maintained for recreational use

### Topography and Drainage

- the surface of the landfill is generally rolling, with a minimum of flat surfaces; the site slopes westward and southward
- drainage on the site is excellent

## Identified Impact

### Settlement & Erosion

- settlement depressions were observed over the entire extent of the landfill area
- settlement has also occurred in a portion of the Oakville Power Boat Club building on the site
- erosion is not significant at the site, although a very steep embankment (about 1:1) occurs along the north limits of the fill

### Vegetation Stress

- large patches of decayed vegetation over much of this site, especially near the Oakville Power Boat Club building

### Leachate

- no leachate or leachate staining was observed during an inspection of the bank along Oakville Creek

### Methane Gas

- methane gas was found in several barholes in the landfill site
- highest readings were obtained on the hill near the tennis courts and the Oakville Power Boat Club building
- no methane was found in the park at the southern end of the site or in any of the monitored buildings

## Potential Impacts

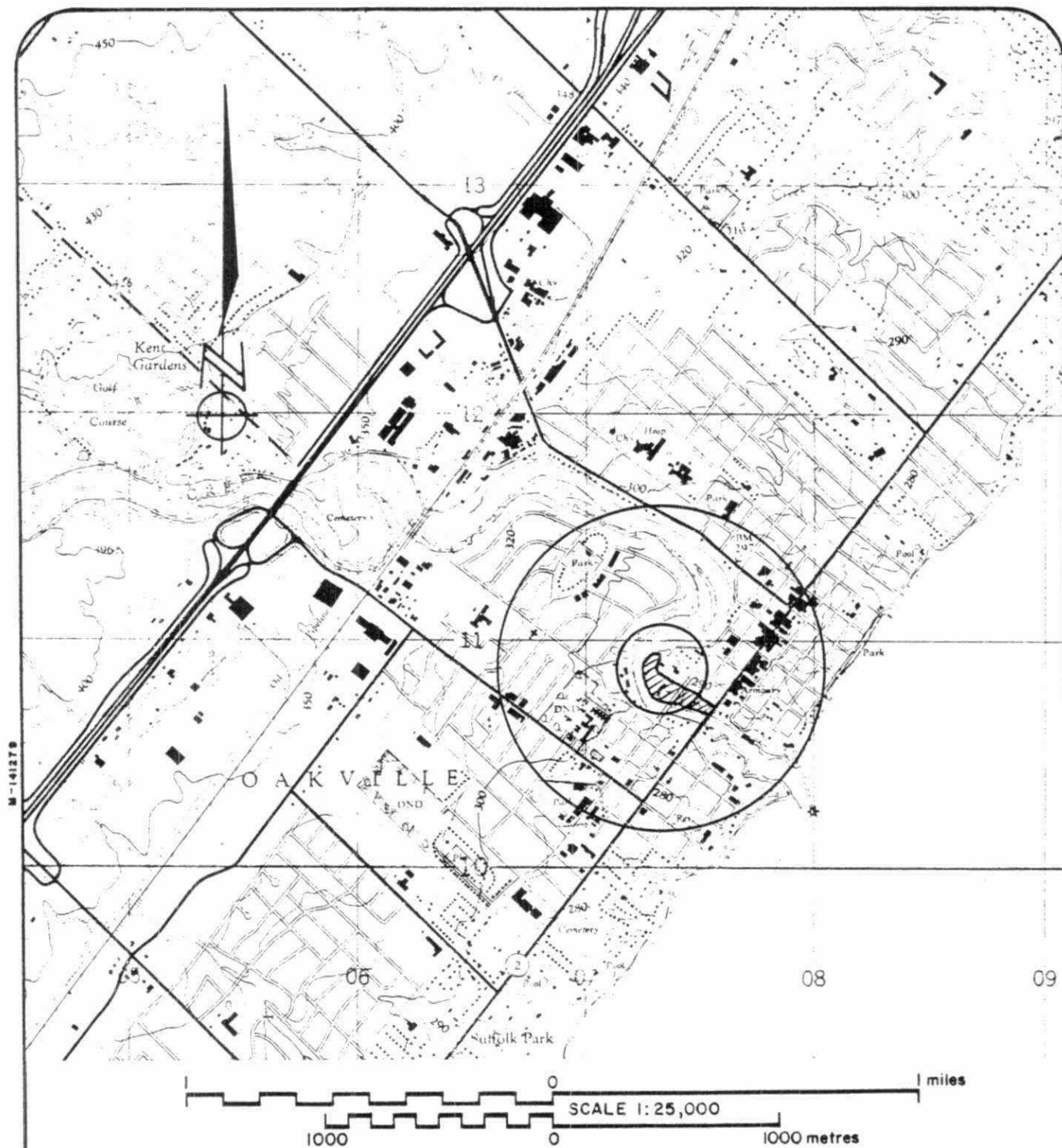
- gas migration into the Oakville Power Boat Club via granular bedding beneath the floor slab
- gas migration into the abutting buildings, (including the Oakville Fire Department, Oakville Centennial Building, Pool and Library) via granular bedding in the parking areas or service trenches or the sandy overburden of the area



## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

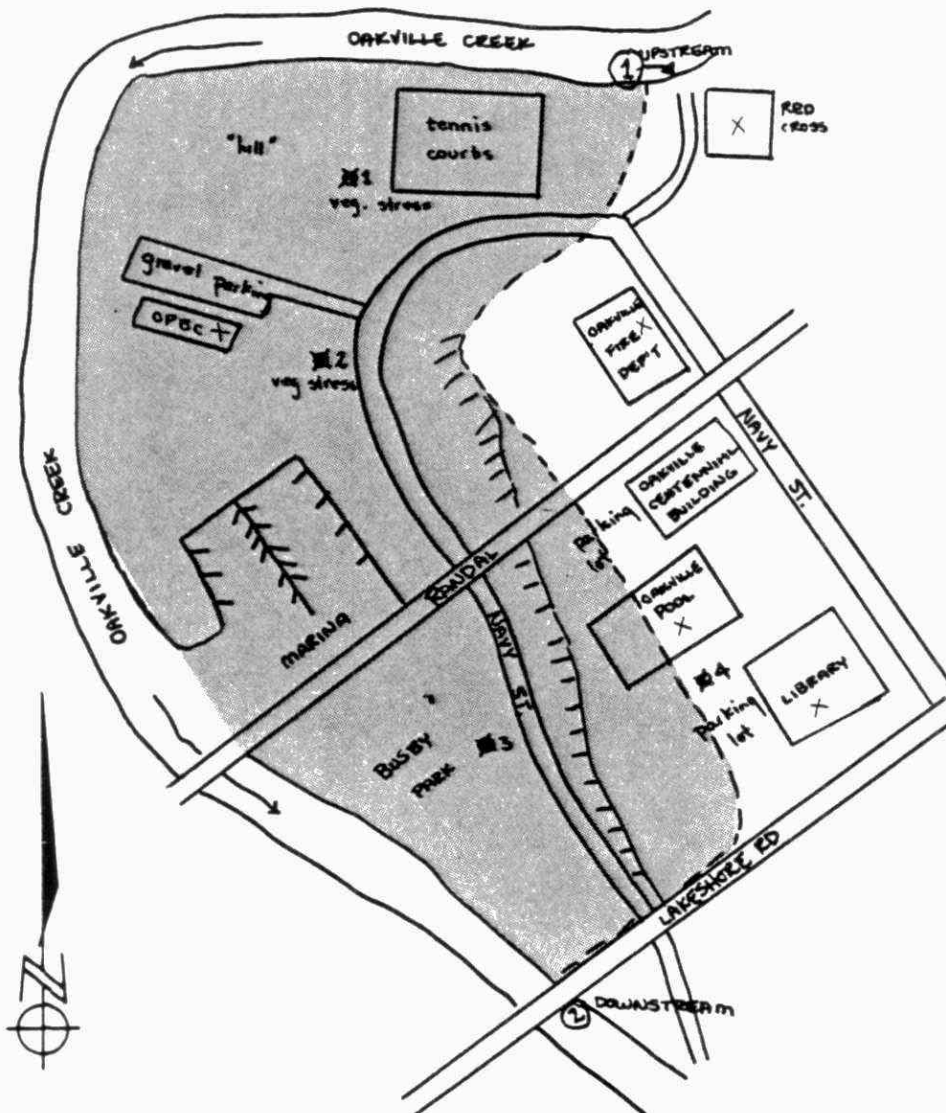
| <u>LOCATION</u>                                                                         | <u>ESTIMATED<br/>NUMBER</u> |
|-----------------------------------------------------------------------------------------|-----------------------------|
| - perimeter of Oakville Power Boat Club building                                        | 6                           |
| - vicinity of foundation of Oakville Centennial Building, the swimming pool and library | 6                           |
| - vicinity of foundation of Oakville Fire Dept. building                                | 2                           |



SITE NO. 7048  
OAKVILLE

Morrison Beatty Limited  
Gore & Storrie Limited

M-250780



LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS ①
- GAS SAMPLE LOCATIONS
  - in field ⊗ 2
  - in buildings x 2

NOT TO SCALE

SITE NO. 7048  
OAKVILLE

Morrison Beatty Limited  
Gore & Storrie Limited



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# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

7048



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

DISPOSAL  
AREA



SCALE 1:4500





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION

DATE Oct. 1, 1980

SITE IDENTIFICATION CODE 7048

SITE Sixteen Mile Creek (Oakville Cr.), Oakville

(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

|                            | 1   | 2     | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|-----|-------|---|---|---|---|---|---|---|----|
| 1) Chlorides               | 183 | 122   |   |   |   |   |   |   |   |    |
| 2) pH                      | 7   | 7     |   |   |   |   |   |   |   |    |
| 3) Iron                    | .10 | .08   |   |   |   |   |   |   |   |    |
| 4) Alkalinity              | 205 | 171.2 |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 520 | 440   |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

Test

Test

Holes

Results

Holes

Results

Name/Address

Results

Name/Address

Results

#1

76%

#6

\_\_\_\_\_

1. 167 Navy St. Red Cross

0%

6.

#2

40%

#7

\_\_\_\_\_

2. Oakville Fire Dept.

0%

7.

#3

0%

#8

\_\_\_\_\_

3. Oakville Centennial Pool

0%

8.

#4

0.5%

#9

\_\_\_\_\_

4. Oakville Centennial Library

0%

9.

#5

#10

\_\_\_\_\_

5. Oakville Power Boat Club

0%

10.

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





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Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7054

Location..... BAYVIEW PARK  
BURLINGTON  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited



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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7054

LOCATION Bayview

Park & King's Road

Burlington

## Background

### Waste Disposal Practices

- Operated as a municipal wastes disposal site by the City of Burlington from the early 1960's to the early 1970's.
- The landfill covers an area of 18 hectares and is up to 15 m in depth.
- Information source was comprehensive hydrogeologic impact study by Morrison Beatty Limited in early 1980.

### Land Uses

#### Original

- The site is located in a worked-out shale quarry.

### Present Development

#### On - site

- Mainly undeveloped.
- Equestrian Club and associated buildings.

#### Abutting

- North & West - Undeveloped land.
- East - Quarries.
- South - Undeveloped land.
- Burlington Rod and Gun Club buildings.

### Present Site Owner

- City of Burlington.

## Identified Impact

### Settlement & Erosion

- there are signs of settlement depressions over the extent of the site
- minor erosion was noted at several locations on the steep outer slopes on the west, south and east boundaries of the site; concrete rubble has been placed in a watercourse at the north end for erosion control

### Vegetation Stress

- patchy areas of decayed vegetation can be found over much of the site

### Leachate

- the most significant impact is the discharge of leachate into 3 or 4 tributary streams of Indian Creek; these tributaries rise at the toe of the landfill
- there is little or no assimilation of the leachate constituents in the streams north of Hwy 403. The leachate quality is typical of relatively "young" landfills
- a comprehensive analysis of the leachate was conducted in 1979 and 1980 by Morrison Beatty Limited and the Ministry of the Environment; the analyses included the major ions, organics, nutrients, heavy metals, polychlorinated biphenyls (PCB) and 19 organochlorine pesticides
- the results indicate that significant attenuation of some constituents occurs in swamp lands on the National Sewer Pipe Ltd property immediately south of the site; the conservative constituents appear to be assimilated to acceptable limits at the CN railway, south of Hwy 403

### Methane Gas

- concentrations of up to 71% methane were measured in barholes on the site
- the site is totally isolated from residential buildings, although an equestrian club and a gun club have facilities on the site

### Potential Impacts

- no impacts due to methane gas are anticipated, providing building is not permitted on the site
- the discharge of leachate into the Indian Creek tributaries is expected to continue for many decades; the concentrations of most constituents should gradually decrease below the present levels



## Hydrogeologic Setting

### Geology

- the Bayview landfill is located in a worked-out shale quarry, the entire area is underlain by Queenston shale

### Regional Drainage

- the site is located in the upper reaches of the Indian Creek watershed
- exposed shale in the upper part of the watershed results in a high runoff to infiltration ratio

## Disposal Site Detail

### Fill Characteristics

- the fill ranges up to 15 m in depth in the deepest portions of the old quarry
- King Road forms the eastern and northern boundary of the landfill; a bedrock ridge forms the western boundary
- the surface is currently being covered and vegetated; the grass vegetation is rough-cut several times per year

### Topography and Drainage

- the surface of the fill is smoothly graded with a gentle southward slope; outer embankments are up to 10 m in height, with about 3:1 slopes
- the relatively flat surface contours allows significant infiltration; this has resulted in a perennial discharge of leachate into ravines at the south end
- surface runoff is directed eastward and southward

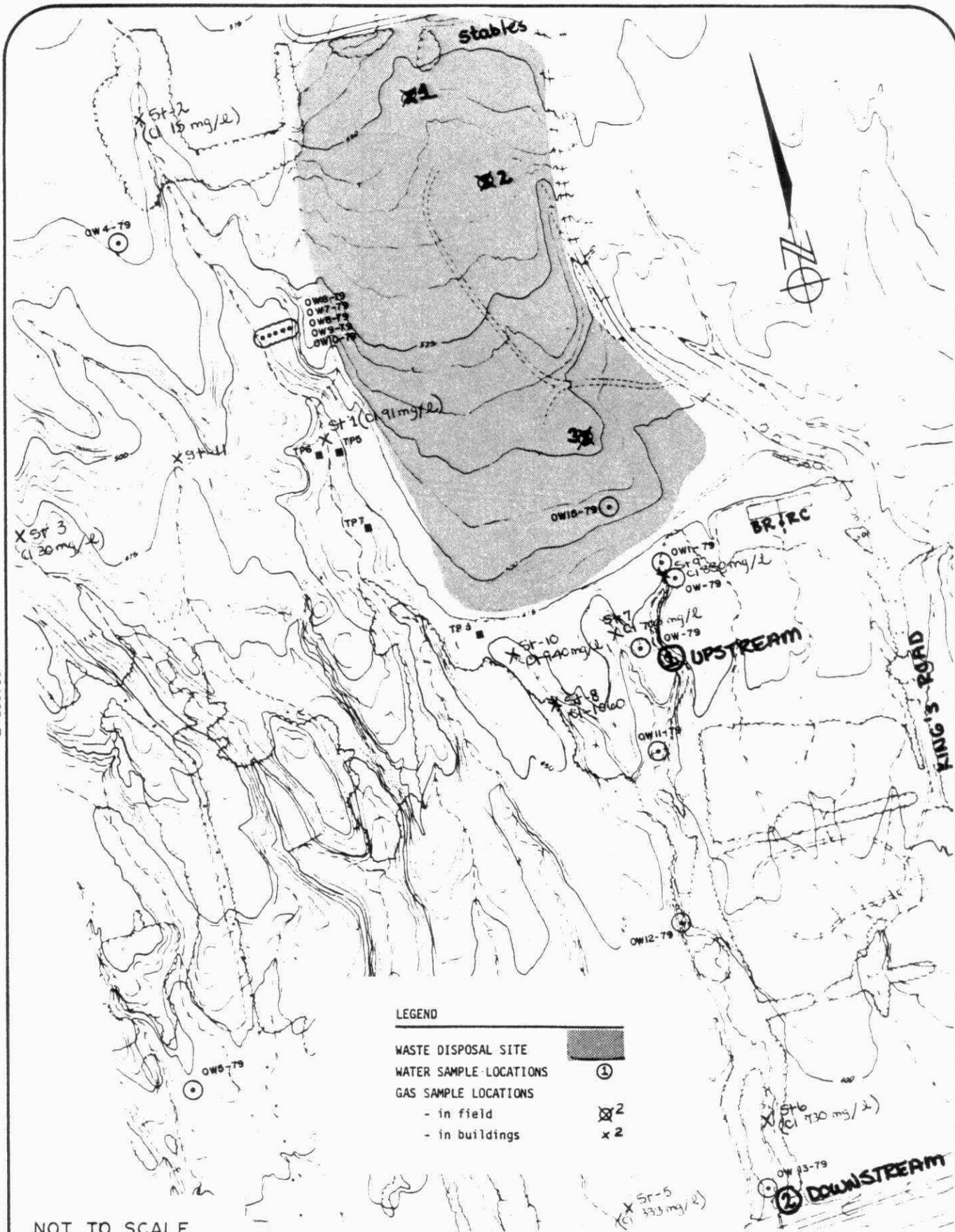
## Recommendations

1. The proposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies a the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) a comprehensive analysis of leachate discharging from the site should be made on a monthly basis for a 12-month period,
  - ii) a comprehensive analysis of the streams which rise at the Bayview site should be made at several monitoring stations between the site and Hamilton Harbour. As above, these analyses should be made monthly for a 12-month period,
  - iii) the leachate flow and streamflow at each station should be measured each sampling date.
3. The results of the leachate and stream monitoring program should be assessed to determine:
  - i) the assimilation capacity of the streams,
  - ii) the extent of off-site impacts,
  - iii) the need for continued monitoring, and
  - iv) the need for a leachate control system.

M-141278



M-250780



NOT TO SCALE

SITE NO. 7054  
BURLINGTON

Morrison Beatty Limited  
Gore & Storrie Limited





Ontario

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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7054



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:6670





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 1, 1980 SITE IDENTIFICATION CODE 7054  
SITE Burlington, Bayview Park and King Road  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

|                                  | Results |      |   |   |   |   |   |   |   |    |
|----------------------------------|---------|------|---|---|---|---|---|---|---|----|
|                                  | 1       | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides                     | 1373    | 1159 |   |   |   |   |   |   |   |    |
| 2) pH                            | 8       | 9    |   |   |   |   |   |   |   |    |
| 3) Iron                          | .14     | .10  |   |   |   |   |   |   |   |    |
| 4) Alkalinity                    | 1575    | 753  |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu\text{mhos}$ | -       | 2900 |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

Parameter

|                     | Results |   |   |   |   |   |   |   |   |    |
|---------------------|---------|---|---|---|---|---|---|---|---|----|
|                     | 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides        |         |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |         |   |   |   |   |   |   |   |   |    |
| 3) Iron             |         |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |         |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |         |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

| Test  | Results | Test  | Results |
|-------|---------|-------|---------|
| Holes |         | Holes |         |
| #1    | 71%     | #6    |         |
| #2    | 55%     | #7    |         |
| #3    | 17%     | #8    |         |
| #4    |         | #9    |         |
| #5    |         | #10   |         |

###### D. BUILDINGS NONE AVAILABLE FOR TESTING

| Name/Address                        | Results | Name/Address | Results |
|-------------------------------------|---------|--------------|---------|
| 1. BR & RC King's Rd. (no one home) |         | 6.           |         |
| 2.                                  |         | 7.           |         |
| 3.                                  |         | 8.           |         |
| 4.                                  |         | 9.           |         |
| 5.                                  |         | 10.          |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7055

Location..... KERN'S ROAD  
BURLINGTON  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited





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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7055

LOCATION

Kern's Road

Burlington

## Background

### Waste Disposal Practices

- Southern portion was operated originally as the Nelson Township Garbage disposal site and then taken over by the City of Burlington.
- The site is believed to have operated in the 1960's and closed in early 1970.
- A study for the subdivision development found that the wastes were up to 13 metres deep.
- The fill is municipal with organics, glass, wood and metal wastes.
- Information sources included a local resident and the firm of William Trow & Associates' foundation investigation study for the proposed homes.

### Land Uses

**Original** - Open space farmland.

### Present Development

**On - site**

- A low density residential subdivision which includes Village Green, Clifton Green and Larchwood Green Crescents.
- A portion of Four Seasons Drive and Kern's Road intersection.
- Residential development on Kern's Road and south to include the small plaza parking lot.

**Abutting**

North - Bush covered land and residential houses along Kern's Road.

West - Hager Creek and bush area.

East - Kern's Road and undeveloped land.

South - Residential houses along Kern's Road.

### Present Site Owner

- The land is owned by the private homeowners.
- The road allowances are owned by the City of Burlington.

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## Hydrogeologic Setting

### Geology

- the general area is underlain by Queenston shale; however, thin deposits of glacial till may be present locally

### Regional Drainage

- the site abuts Hager Creek, which flows in a deep ravine immediately west of the residential development at the site
- the internal portions of the subdivision is served by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the refuse at this site appears to have been dumped into roadside ravines
- test drilling by Wm. Trow Associates (in 1974) shows refuse depths up to 10 m; the Trow report recommended pile foundations for homes built on the Kern's Road fill area; no information was obtained for the foundation design of homes on the 3 cul-de-sac subdivisions

### Topography and Drainage

- the properties around each cul-de-sac development have been graded inward to the storm sewer catchments
- drainage appears to be good

M-141278

## Identified Impact

### Settlement & Erosion

- settlement of the fill has caused irregular depressions in the pavement at the three cul-de-sacs, especially Larchwood Green

### Vegetation Stress

- there were no apparent signs of vegetation stress anywhere on this site; however, most property owners maintain high-quality lawns

### Leachate

- no leachate seepage was observed at the site
- the conductivity of the nearby stream increased downstream from the site; the other parameters did not change significantly

### Methane Gas

- four barholes placed in the site did not produce methane readings
- methane gas was not detected in any of the monitored homes on Larchwood Green, Clifton Green and Village Green
- soil testing on Lots 42 to 49 (on Kern's Road, south of Larchwood Green) by Wm. Trow Associates in 1974 showed no methane in that area of the fill (at depths of 7-10 m)

## Potential Impacts

- the distribution of waste at this site is very uncertain; a potential for gas migration into house basements exists at any location where the homes are constructed on fill material

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact, and
  - iv) minimum buffer zones for future development around the site.

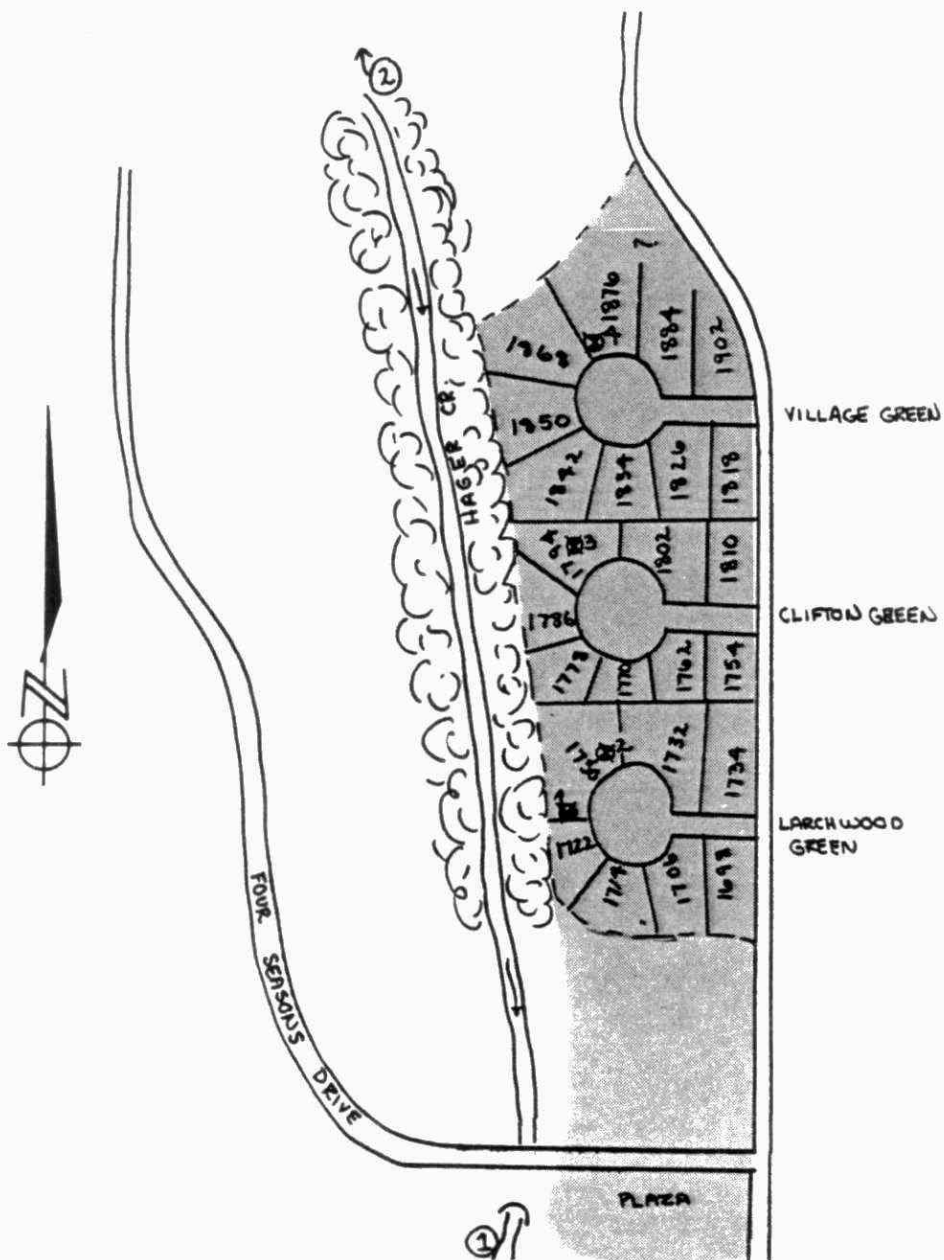
### LOCATION

### ESTIMATED NUMBER

- properties where soil investigations or foundation excavations verified the presence of refuse

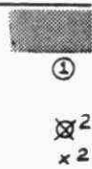
2 per lot





LEGEND

WASTE DISPOSAL SITE  
 WATER SAMPLE LOCATIONS  
 GAS SAMPLE LOCATIONS  
 - in field  
 - in buildings



NOT TO SCALE

SITE NO. 7055  
 KERN'S RD., BURLINGTON

Morrison Beatty Limited  
 Gore & Storrie Limited





Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

7055



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

DISPOSAL  
AREA



SCALE 1:6670





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 1, 1980 SITE IDENTIFICATION CODE 7055

SITE Kern's Road, Con II SDS, Lot 23, Burlington  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

| 1                          | 2   | 3    | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|-----|------|---|---|---|---|---|---|----|
| 1) Chlorides               | 214 | 240  |   |   |   |   |   |   |    |
| 2) pH                      | 8   | 8    |   |   |   |   |   |   |    |
| 3) Iron                    | .10 | .14  |   |   |   |   |   |   |    |
| 4) Alkalinity              | 360 | 360  |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 190 | 1020 |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

Parameter

Results

| 1                   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

Test

Holes Results

Test

Holes Results

Name/Address

Results

Name/Address

Results

|    |    |     |  |                                       |    |                                       |    |
|----|----|-----|--|---------------------------------------|----|---------------------------------------|----|
| #1 | 0% | #6  |  | 1. 1698 Larchwood Green               | 0% | 6. 1732 Larchwood Green (no one home) |    |
| #2 | 0% | #7  |  | 2. 1706 Larchwood Green (no one home) |    | 7. 1734 Larchwood Green               | 0% |
| #3 | 0% | #8  |  | 3. 1714 Larchwood Green (no one home) |    | 8. 1754 Clifton Green                 | 0% |
| #4 | 0% | #9  |  | 4. 1722 Larchwood Green (no one home) |    | 9. 1762 Clifton Green                 | 0% |
| #5 |    | #10 |  | 5. 1730 Larchwood Green               | 0% | 10. 1770 Clifton Green                | 0% |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7055 - Page 2

SITE Kern's Road con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

#1 \_\_\_\_\_  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

Test

Holes Results

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

Name/Address

1. 1778 Clifton Green (no one home)  
2. 1786 Clifton Green (would not let in)  
3. 1794 Clifton Green (no one home)  
4. 1802 Clifton Green 0%  
5. 1810 Clifton Green 0%

Results

Name/Address

6. 1818 Village Green 0%  
7. 1826 Village Green 0%  
8. 1834 Village Green 0%  
9. 1842 Village Green (no one home)  
10. 1850 Village Green (no one home)

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ministry  
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Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7055 - Page 3

SITE Kern's Road con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### Test

Holes Results

|    |       |     |       |
|----|-------|-----|-------|
| #1 | _____ | #6  | _____ |
| #2 | _____ | #7  | _____ |
| #3 | _____ | #8  | _____ |
| #4 | _____ | #9  | _____ |
| #5 | _____ | #10 | _____ |

###### D. BUILDINGS

Name/Address

Results

|                                     |    |
|-------------------------------------|----|
| 1. 1868 Village Green               | 0% |
| 2. 1876 Village Green               | 0% |
| 3. 1884 Village Green (no one home) |    |
| 4. 1902 Village Green (no one home) |    |
| 5. _____                            |    |

Name/Address

Results

|           |       |
|-----------|-------|
| 6. _____  | _____ |
| 7. _____  | _____ |
| 8. _____  | _____ |
| 9. _____  | _____ |
| 10. _____ | _____ |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 2, 1980 SITE IDENTIFICATION CODE 7059

SITE Mill St. and McNabb St., Georgetown  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

|                            | 1    | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|------|-----|---|---|---|---|---|---|---|----|
| 1) Chlorides               | 91.5 | 122 |   |   |   |   |   |   |   |    |
| 2) pH                      | 7    | 7   |   |   |   |   |   |   |   |    |
| 3) Iron                    | .08  | .08 |   |   |   |   |   |   |   |    |
| 4) Alkalinity              | 240  | 205 |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 430  | 420 |   |   |   |   |   |   |   |    |

B. WELLS WITHIN 100 METRES NONE

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No X Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes

Results

Test

Holes

Results

Name/Address

Results

Name/Address

Results

#1 3%  
#2 30%  
#3 35%  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

1. 1 Mill St. 0%  
2. 2 Mill St. (no one home)  
3. 3 Mill St. (no one home)  
4. 4 Mill St. 0%  
5. 5 Mill St. 0%

6. 6 Mill St. 0%  
7. 7 Mill St. (no one home)  
8. 8 Mill St. (no one home)  
9. \_\_\_\_\_  
10. \_\_\_\_\_

III General Comments (vegetation, leachate springs, depth, etc.)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





Ontario

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Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7059

Location..... MCNABB STREET  
GEORGETOWN  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited





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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7059

LOCATION

Mill & McNabb Sts.

Halton Hills  
(Georgetown)

## Background

### Waste Disposal Practices

- Operated by the Town of Georgetown as a domestic waste disposal area; it is about 1 hectare in size.
- The fill is not very deep, since the bank of the Silver Creek does not appear to be raised significantly by the addition of the fill.

### Land Uses

**Original** - A low swampy area adjacent to the creek.

### Present Development

**On - site**

- The site is vacant.
- A watermain along the north side of Mill Street (construction currently underway).

**Abutting**

- Northeast - Silver Creek.
- Southwest - Rowhousing (8 residential units) and parking lot.
- Northwest - CNR railway line.
- Southeast - Mill Street.

### Present Site Owner

- Undetermined.

## Hydrogeologic Setting

### Geology

- the site is located in a glacial spillway deposit of sand and gravel

### Regional Drainage

- the site abuts Silver Creek, which flows southward along the eastern boundary of the landfill

## Disposal Site Detail

### Fill Characteristics

- the landfill is located in the floodplain of Silver Creek; a 1-2 m steep embankment borders the creek and has been rip-rapped for erosion control
- the site is vegetated with native grasses and weeds, and is rough-cut several times per year
- a trench for a new water main exposed earth and refuse along Mill St; the fill ranges from 1-4 m in depth

### Topography and Drainage

- the surface of the fill slopes gently toward Silver Creek; relief on the site is about 5 m
- the water table in a low swale in the northeast corner of the site is at ground surface; all upland and on-site drainage is directed to Silver Creek

M-141279

## Identified Impact

### Settlement & Erosion

- there are settlement cracks and depressions over much of the site
- erosion does not appear to be a problem here

### Vegetation Stress

- patches of decayed vegetation were present over much of the site except in the lowland areas adjacent the creek

### Leachate

- no leachate was observed at any location along the landfill edge abutting Silver Creek

### Methane Gas

- methane gas was detected at all selected locations in the landfill site; the highest concentration was at the highest elevation on the site
- no methane was found in any of the monitored residences

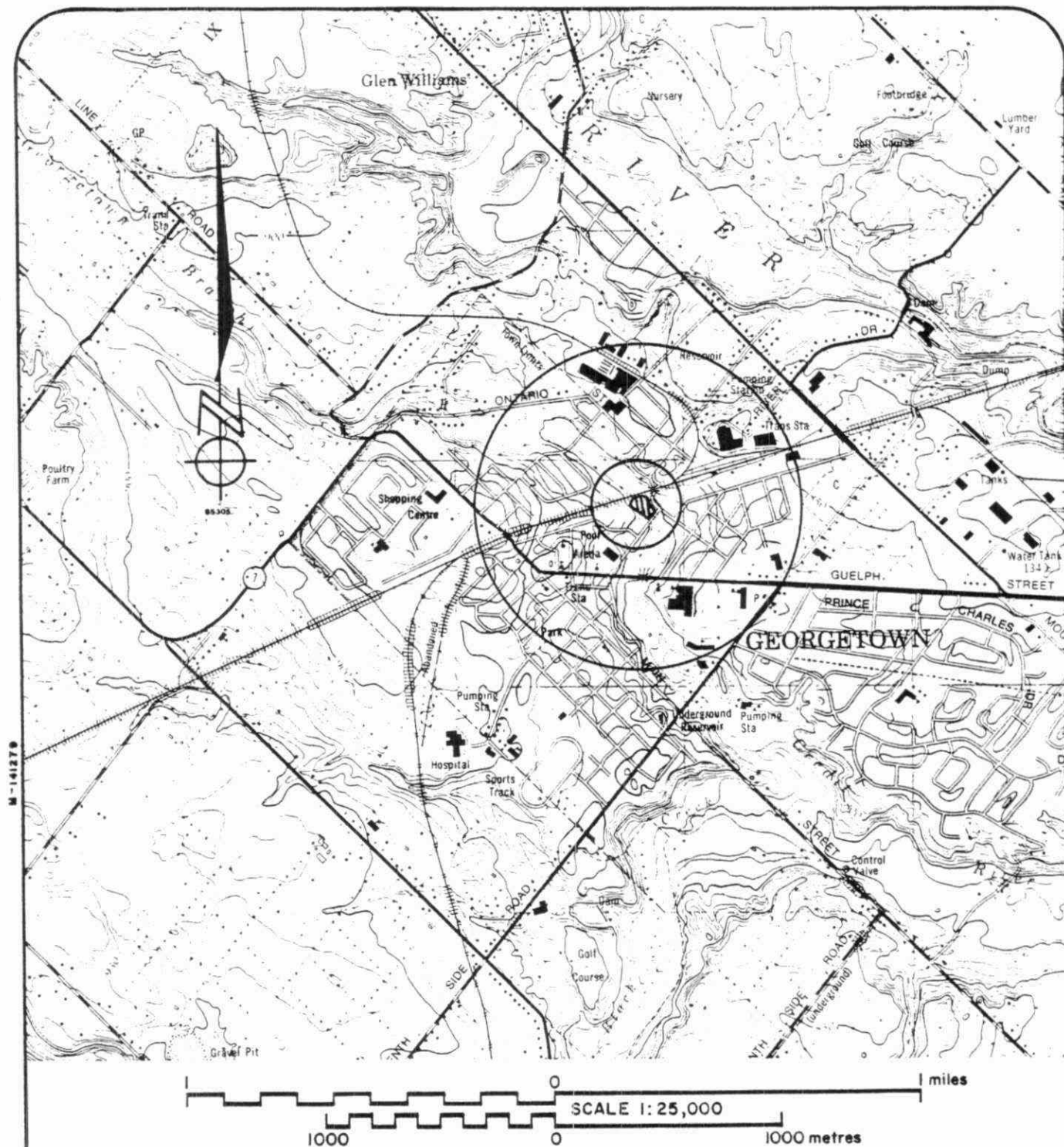
## Potential Impacts

- gas migration from the site to the row housing off Mill Street via granular bedding beneath the paved parking area or through the sand and gravel overburden found in the area

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact, and
  - iv) minimum buffer zones for future development around the site.

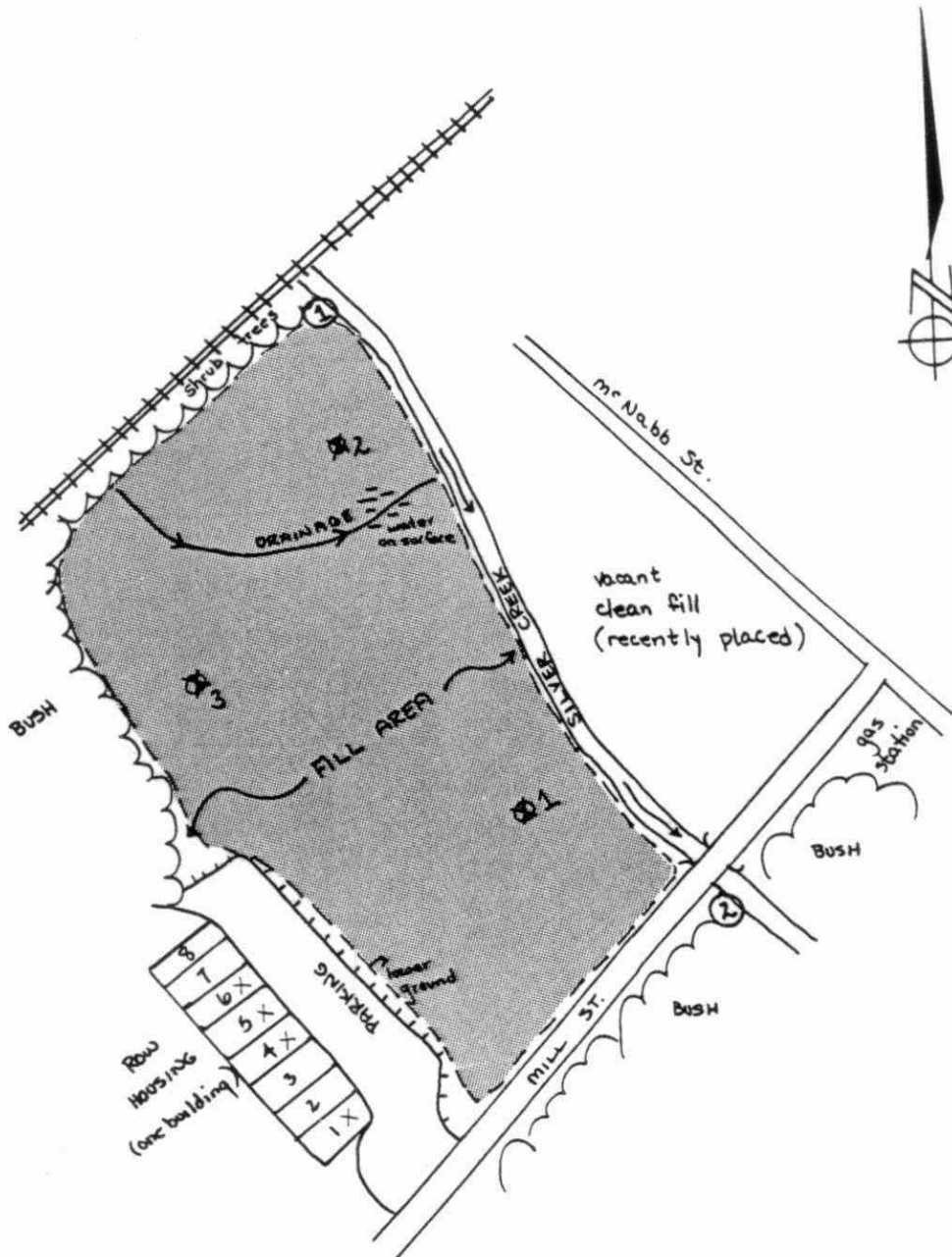
| <u>LOCATION</u>                            | <u>ESTIMATED<br/>NUMBER</u> |
|--------------------------------------------|-----------------------------|
| - east side of townhouse at 18 Mill Street | 6                           |



SITE NO. 7059  
GEORGETOWN

Morrison Beatty Limited  
Gore & Storrie Limited

M-250780



LEGEND

- |                        |                                                                                       |
|------------------------|---------------------------------------------------------------------------------------|
| WASTE DISPOSAL SITE    |  |
| WATER SAMPLE LOCATIONS | ①                                                                                     |
| GAS SAMPLE LOCATIONS   |                                                                                       |
| - in field             | ⊗ <sup>2</sup>                                                                        |
| - in buildings         | x <sup>2</sup>                                                                        |

NOT TO SCALE

SITE NO. 7059  
GEORGETOWN

Morrison Beatty Limited  
Gore & Storrie Limited





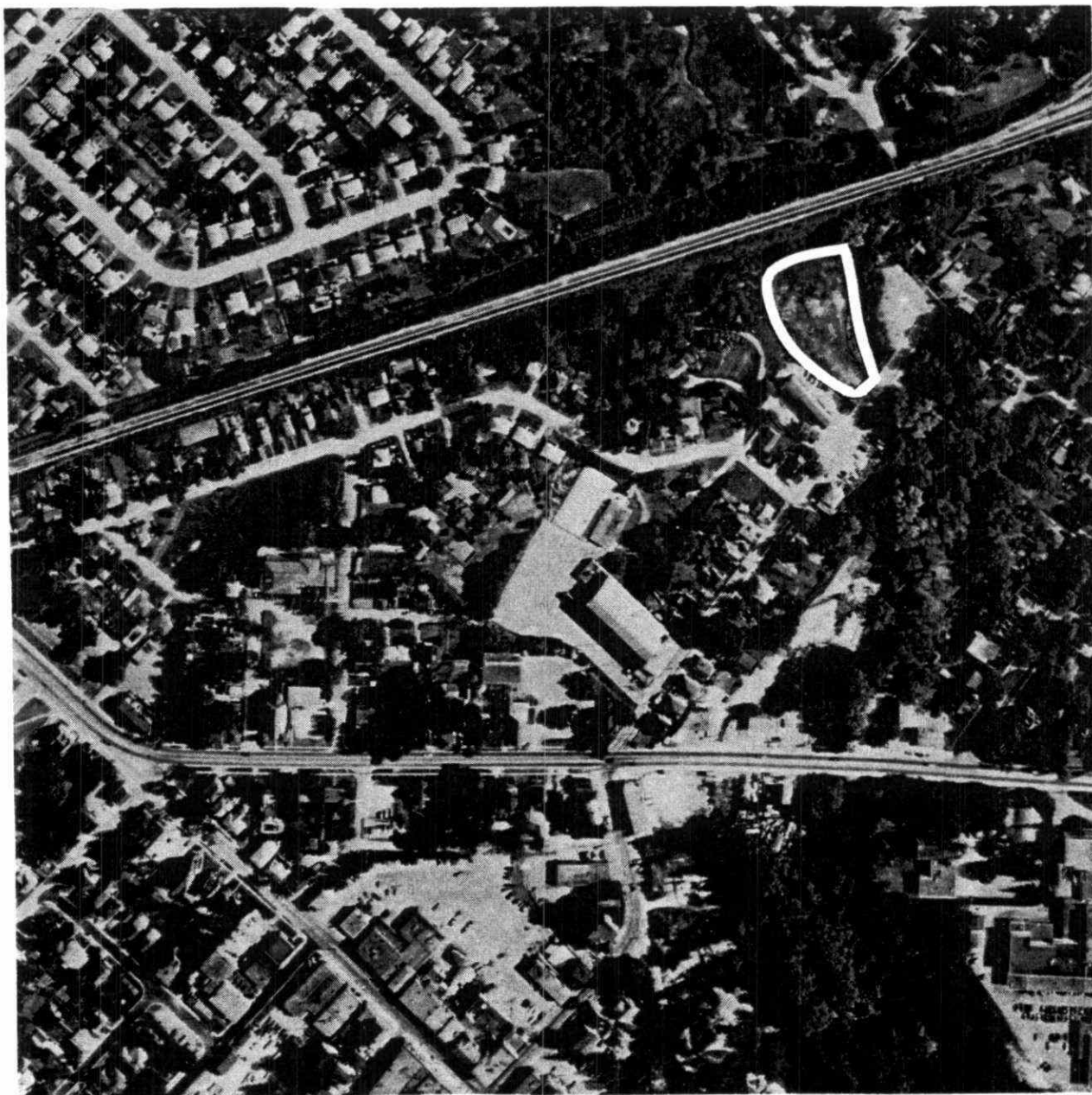
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# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7059



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





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Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE October 2, 1980 SITE IDENTIFICATION CODE 7059  
SITE Mill Street and McNabb Street, Georgetown  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

|                            | 1    | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|------|-----|---|---|---|---|---|---|---|----|
| 1) Chlorides               | 91.5 | 122 |   |   |   |   |   |   |   |    |
| 2) pH                      | 7    | 7   |   |   |   |   |   |   |   |    |
| 3) Iron                    | .08  | .08 |   |   |   |   |   |   |   |    |
| 4) Alkalinity              | 240  | 205 |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 430  | 420 |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

| Test  | Results | Test  | Results |
|-------|---------|-------|---------|
| Holes |         | Holes |         |
| #1    | 3%      | #6    |         |
| #2    | 30%     | #7    |         |
| #3    | 35%     | #8    |         |
| #4    |         | #9    |         |
| #5    |         | #10   |         |

###### D. BUILDINGS

| Name/Address                         | Results | Name/Address                         | Results |
|--------------------------------------|---------|--------------------------------------|---------|
| 1. 18 Mill St., Unit 1               | 0%      | 6. 18 Mill St., Unit 6               | 0%      |
| 2. 18 Mill St., Unit 2 (no one home) |         | 7. 18 Mill St., Unit 7 (no one home) |         |
| 3. 18 Mill St., Unit 3 (no one home) |         | 8. 18 Mill St., Unit 8 (no one home) |         |
| 4. 18 Mill St., Unit 4               | 0%      | 9.                                   |         |
| 5. 18 Mill St., Unit 5               | 0%      | 10.                                  |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7060

Location..... MAIN STREET  
GEORGETOWN  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited



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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7060

LOCATION Main St.

S. and Mill Street

Georgetown

## Background

### Waste Disposal Practices

- Operated in the 1940's by the Town of Georgetown for domestic waste disposal.
- It covers an area of roughly 1 hectare.
- Of the many people interviewed, few were aware that the fill area existed.
- One store owner remembered that the parking lot was paved in 1950 and speculated that the dump must have closed in the 1940's.
- He also remembered "cave-ins" in the parking lot asphalt.
- Information sources included the nearby store owners.

### Land Uses

- Original** - It appears that the site was formerly an old ravine.

### Present Development

- On - site** - Paved parking lot.

- Abutting**
- North - Bank Street.
  - West - 4 commercial buildings.
  - East - 4 commercial buildings.
  - South - Mill Street.

### Present Site Owner

- Several owners of the parking lot.
- Silvers.
- The Georgetown Hotel.
- Lacada Estates.
- Halton Hills Hydro.

Morrison Beatty Limited | Gore & Storrie Limited

## Identified Impact

### Settlement & Erosion

- the parking lot (fill site) has minor settlement depressions and there were reports of "cave-ins" from the store operators

### Vegetation Stress

- the site is entirely paved to create a parking area for the commercial stores on Main Street

### Leachate

- leachate is not a problem at this site

### Methane Gas

- methane gas was not detected in the disposal site or in any of the monitored buildings which abut the site

## Potential Impacts

- the age of the site and impermeable cover on the site suggests potential methane or leachate impacts will be insignificant.

M-141278

## Hydrogeologic Setting

### Geology

- the site is located in a glacial spillway deposit of sand and gravel

### Regional Drainage

- the site is in the watershed of Silver Creek which flows southward about 200 m east of the landfill
- the entire area including the site itself is drained by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the landfill site is entirely covered by asphalt pavement
- a 2 m high embankment surrounds the Halton Hills Hydro property in the northwest corner of the site; this embankment has been graded and is maintained with a good quality grass cover
- there was no clear indication of the depth of fill

### Topography and Drainage

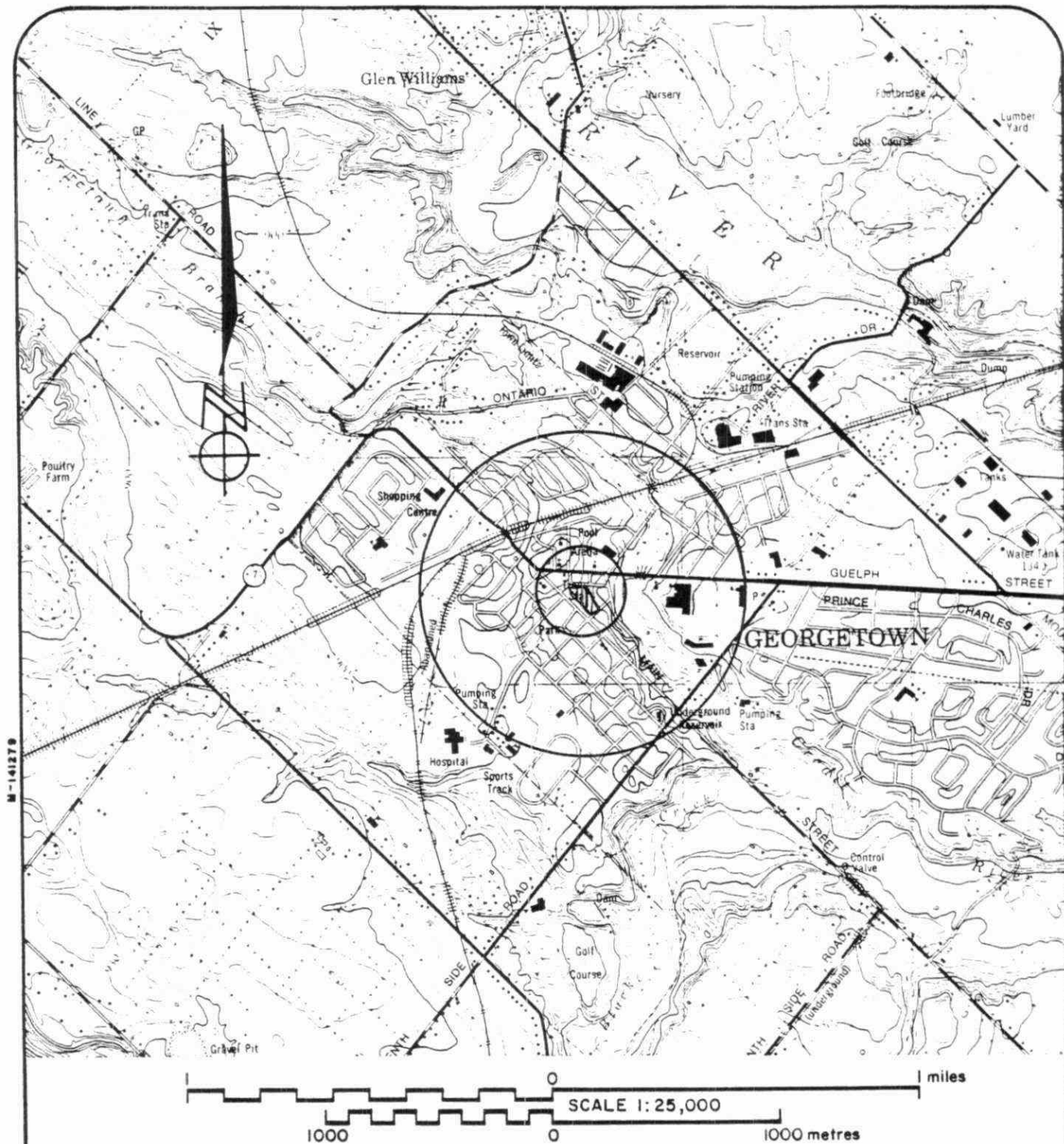
- the surface of the parking lot is slightly undulating and slopes northwestward; relief on the lot is about 3 m
- runoff from the parking lot is directed to catch basins located in depressions in the pavement



## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses.
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

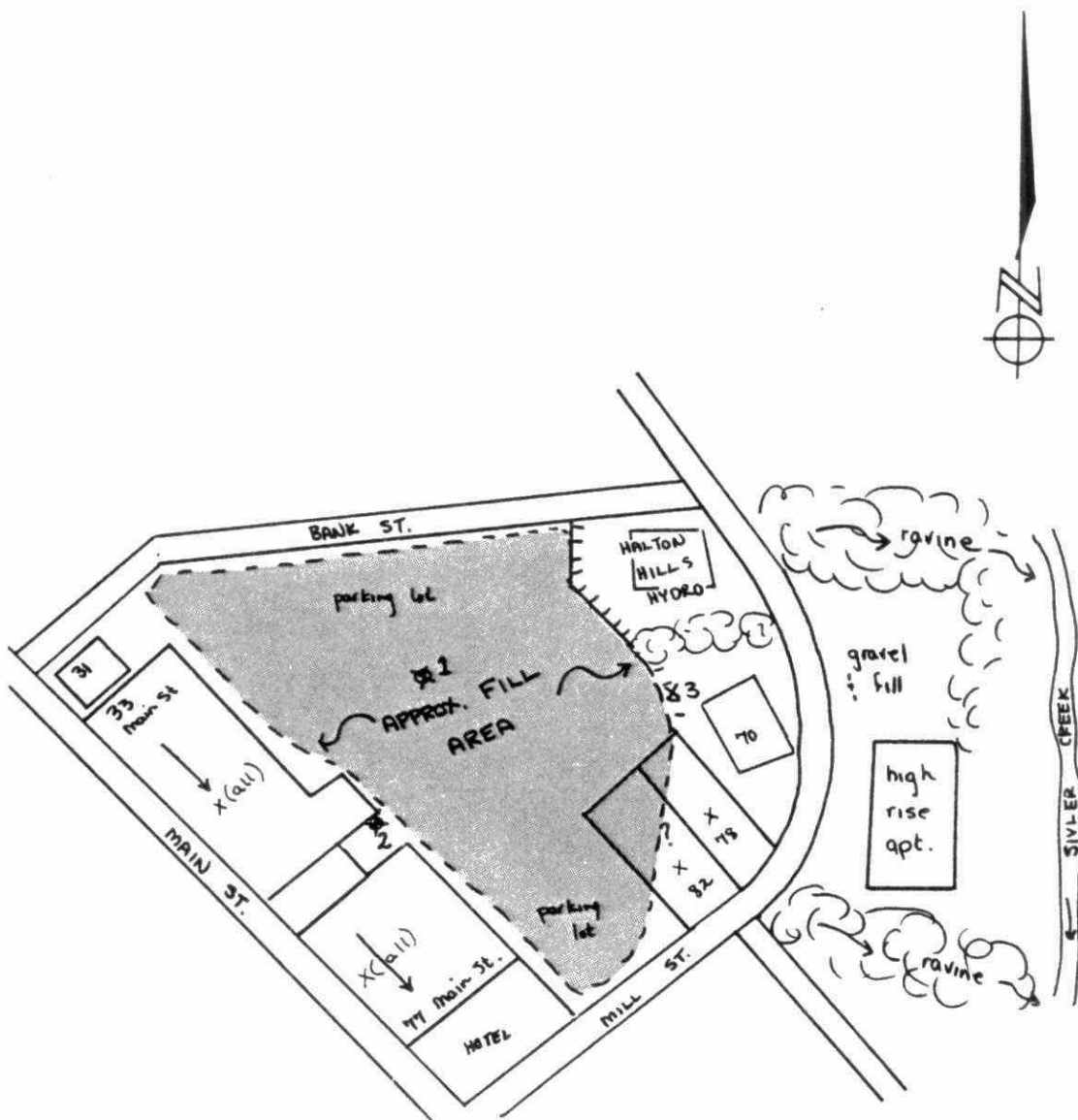
M-141276



SITE NO. 7060  
GEORGETOWN

Morrison Beatty Limited  
Gore & Storrie Limited

M-250780



LEGEND

- WASTE DISPOSAL SITE 
- WATER SAMPLE LOCATIONS ①
- GAS SAMPLE LOCATIONS
  - in field  2
  - in buildings x 2

NOT TO SCALE

SITE NO. 7060  
GEORGETOWN

Morrison Beatty Limited  
Gore & Storrie Limited



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# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

7060



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

DISPOSAL  
AREA



SCALE 1:4500









SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7060 - Page 2

SITE Main and Mill St. S., Georgetown con't.  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

B. WELLS WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test  
Holes Results

Test  
Holes Results

Name/Address

Results

Name/Address

Results

|    |       |     |       |                                 |    |                               |        |
|----|-------|-----|-------|---------------------------------|----|-------------------------------|--------|
| #1 | _____ | #6  | _____ | 1. 55 Main St.S., Variety       | 0% | 6.71 Main St.S., Sports store | 0%     |
| #2 | _____ | #7  | _____ | 2. 57 Main St.S., Salon         | 0% | 7.73 Main St.S., Barber       | 0%     |
| #3 | _____ | #8  | _____ | 3. 61 Main St.S., Paint store   | 0% | 8.75 Main St.S.               | 0%     |
| #4 | _____ | #9  | _____ | 4. 67 Main St.S., Men's clothes | 0% | 9.77 Main St.S.               | 0%     |
| #5 | _____ | #10 | _____ | 5. 69 Main St.S.,               | 0% | 10. Georgetown Hotel          | closed |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7060 - Page 3

SITE Main and Mill St., Georgetown con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### Test

Holes Results

- #1 \_\_\_\_\_
- #2 \_\_\_\_\_
- #3 \_\_\_\_\_
- #4 \_\_\_\_\_
- #5 \_\_\_\_\_

###### Test

Holes Results

- #6 \_\_\_\_\_
- #7 \_\_\_\_\_
- #8 \_\_\_\_\_
- #9 \_\_\_\_\_
- #10 \_\_\_\_\_

###### D. BUILDINGS

Name/Address

1. 78/82 Mill St. (same basement) 0%
2. 70 Mill St. (no one home)
3. 66 Mill St., Halton Hill
4. \_\_\_\_\_ Hydro (no one there)
5. \_\_\_\_\_

Results

Name/Address

6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7062

Location..... ACTON  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7062

LOCATION

Churchill Road

Halton Hills (Acton)

## Background

### Waste Disposal Practices

- Operated by the Town of Acton as a Municipal waste disposal site in the 1950's and 1960's.
- The landfill operation was closed in 1969.
- The size of the site is approximately 1 hectare.
- Information source was local residents.

### Land Uses

Original - A gravel pit.

### Present Development

On - site - Three apartment buildings and their paved parking areas adjacent to each building.

Abutting  
North - Churchill Road.  
West - Eight single family residences on Lawnfield Crescent.  
East - Vacant land and gravel road.  
South - CNR railway track and vacant land.

### Present Site Owner

- W. Fried Construction Company Limited,  
Mississauga, Ontario.

Morrison Beatty Limited | Gore & Storrie Limited

## Identified Impact

### Settlement & Erosion

- minor settlement and cracking has occurred in the paved parking lot areas
- some erosion has occurred on the slope embankment along the railway right-of-way

### Vegetation Stress

- the majority of the fill area has been paved or built over; there is very little vegetation on the site
- the western and southern embankments are overgrown with weeds and shrubs

### Leachate

- no leachate was observed at the toe of the landfill

### Methane Gas

- methane was not detected in any of the four barholes placed into the landfill or monitored apartments

## Potential Impacts

- gas migration beneath the pavement to the subsurface levels of each of the three on-site apartments

M-141279

## Hydrogeologic Setting

### Geology

- the site is located near the edge of a glacial spillway comprised of permeable sandy deposits

### Regional Drainage

- the site is located within the watershed of Black Creek; the main branch is located about 0.5 km south of the landfill area

## Disposal Site Detail

### Fill Characteristics

- the original disposal site was reported to be in the vicinity of the three apartment buildings; however, the most recent landfilling (in the 1960's) took place in the parking lot areas of the site
- the three apartments and parking lots occupy about 85% of the site
- a steep (1:1 slope) embankment ranging from 3-5 m in height forms the western and southern limit of the fill

### Topography and Drainage

- the parking lots are terraced downward to the southeast
- drainage from the parking areas is directed to the rear of the lots, where it flows into the railway ditch

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

| <u>LOCATION</u>                            | <u>ESTIMATED<br/>NUMBER</u> |
|--------------------------------------------|-----------------------------|
| - vicinity of foundation at each apartment | 4 per apartment             |





The map shows a property bounded by Churchill Rd. to the north and CNR to the south. The property is divided into several rectangular lots. The lots are labeled with numbers: 188X, 182, 180, 178X, 176, 174, 172X, 170, 192, 196, 200, and 202. A dashed line indicates a boundary or easement. A north arrow is located in the top right corner.

WASTE DISPOSAL SITE  
WATER SAMPLE LOCATIONS  
GAS SAMPLE LOCATIONS  
- in field  
- in buildings

SITE NO. 7062  
ACTON

**Morrison Beatty Limited**  
**Gore & Storrie Limited**



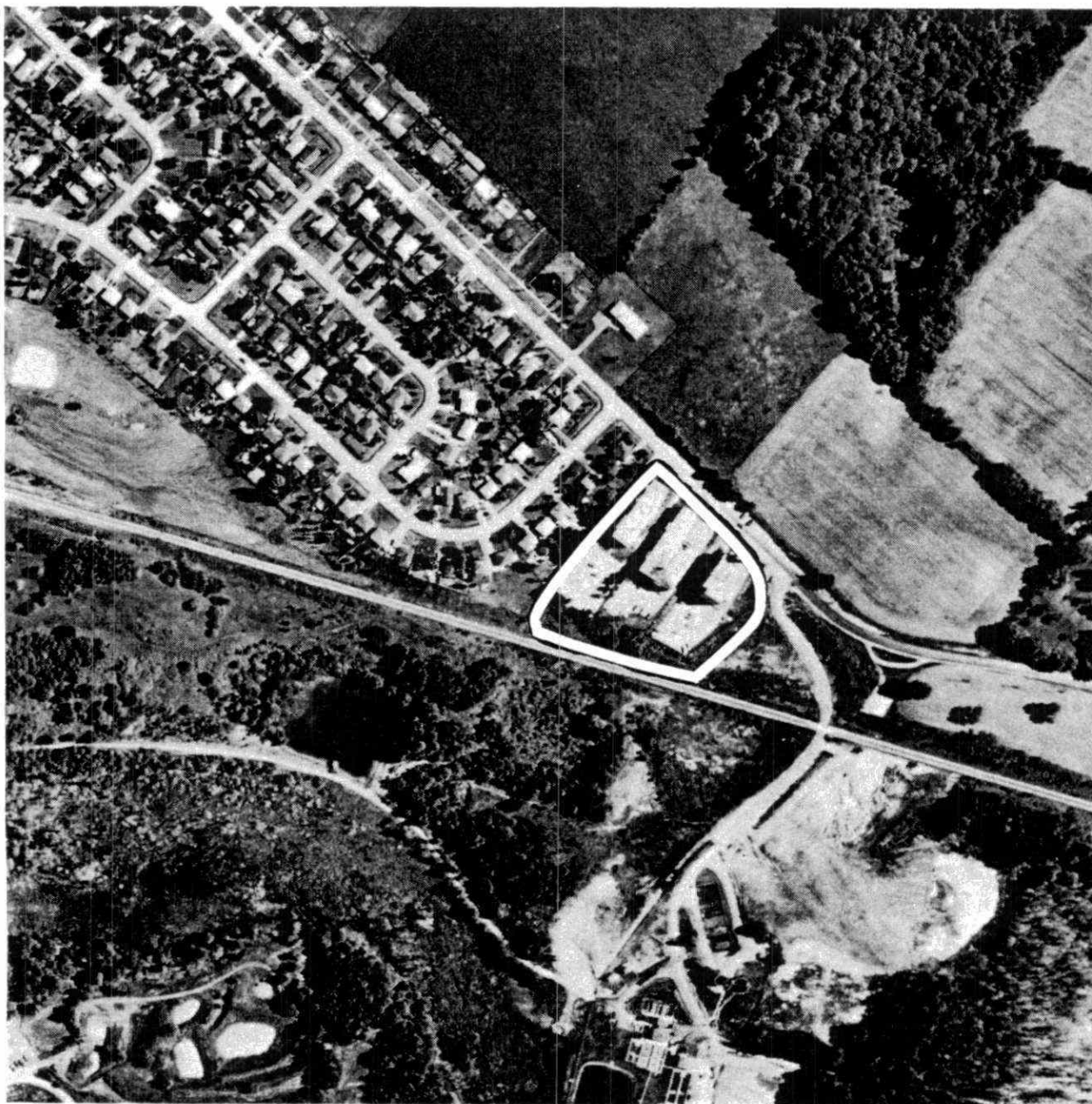
Ministry  
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Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7062



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





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Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 3, 1980 SITE IDENTIFICATION CODE 7062

SITE Churchill St., Acton  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

A. WATER BODIES WITHIN 100 METRES NONE

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES NONE

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes        No X Comments       

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes        No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

C. ON-SITE

D. BUILDINGS

Test

Test

Holes

Results

Holes

Results

Name/Address

Results

Name/Address

Results

#1

0%

#6

1. 170 Lawnfield

(no one home)

6. 180 Lawnfield

(no one home)

#2

0%

#7

2. 172 Lawnfield

0%

7. 182 Lawnfield

(no one home)

#3

0%

#8

3. 174 Lawnfield

(no one home)

8. 188 Churchill St. apt.

0%

#4

0%

#9

4. 176 Lawnfield

(no one home)

9. 192 Churchill St. apt.

0%

#5

#10

5. 178 Lawnfield

0%

10. 196 Churchill St. apt.

0%

III General Comments (vegetation, leachate springs, depth, etc.)         
11. 200 Churchill St. apt. (no one home)

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... BRIAN BEST PARK

Location..... MILTON  
REGION OF HALTON

Morrison Beatty Limited

Gore & Storrie Limited



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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. N/A

LOCATION                     

Brian Best Park

Milton

## Background

### Waste Disposal Practices

- Operated by the Town of Milton as a municipal wastes disposal site in the 1960's.
- The site is roughly 6 hectares in size and has a depth ranging from 1 to 6 metres. A cover of 2 to 2.5 metres of clean fill exists on the site.
- Clean fill only was reported to be deposited in the area between the 16 Mile Creek and the landfill.
- Information source was the soils investigation report by Trow International Limited and Hydrology Consultants Limited.

### Land Uses

#### Original

- Flood plain of Sixteen Mile Creek.

### Present Development

#### On - site

- Parkland.
- Optimists Club.
- Residents on clean fill portion of site.
- Residents on south side of Parkway Avenue.
- Parkway Avenue.

#### Abutting

- North - Commercial Street extension.
- West - Sixteen Mile Creek.
- South - Parkway Avenue and residential area.
- East - Williams Avenue and residential area.

### Present Site Owner

- Town of Milton
- Property owners of private residents and Club.

Morrison Beatty Limited | Gore & Storrie Limited



## Hydrogeologic Setting

### Geology

- regionally, the site is blanketed by a clayey silt till (Halton)
- locally, there are deposits of silt, sand and gravel in the former floodplain of Oakville Creek

### Regional Drainage

- the site is located in the Oakville Creek watershed
- the main branch of the creek by-passes to the east of the site
- the upland developments west and north of the site are serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the site is located in an old meander of Oakville Creek; the main disposal site is set back about 100 m from the creek, however, earth fill and construction rubble have been deposited to the edge of the creek
- the refuse thickness averages about 5 m
- the site is maintained for recreational purposes and has a ball diamond on-site

### Topography and Drainage

- the surface of the disposal site has been graded smooth and flat
- runoff from the site is directed eastward to Oakville Creek

## Identified Impact

### Settlement & Erosion

- there are settlement depressions over the entire surface of Brian Best Park
- some erosion has occurred on the fill slope east of Commercial Street, especially where recent filling has taken place

### Vegetation Stress

- there are patchy areas of decayed vegetation in Brian Best Park; however, the filled areas north of Parkway Drive and east of Commercial Street showed no signs of vegetation stress

### Leachate

- an inspection of the toe of the landfill revealed no leachate seepage points from the fill
- the landfill has had no measureable impact on the water quality of Oakville Creek

### Methane Gas

- methane gas concentrations have been recorded by the Ministry of the Environment on several occasions in 1979 and 1980; methane has been found in the park itself, east of Commercial Street adjacent to the Optimist Club building and the new residential area further south
- no methane gas was detected in any of the monitored homes on Williams Ave, Parkway Drive and Commercial Street

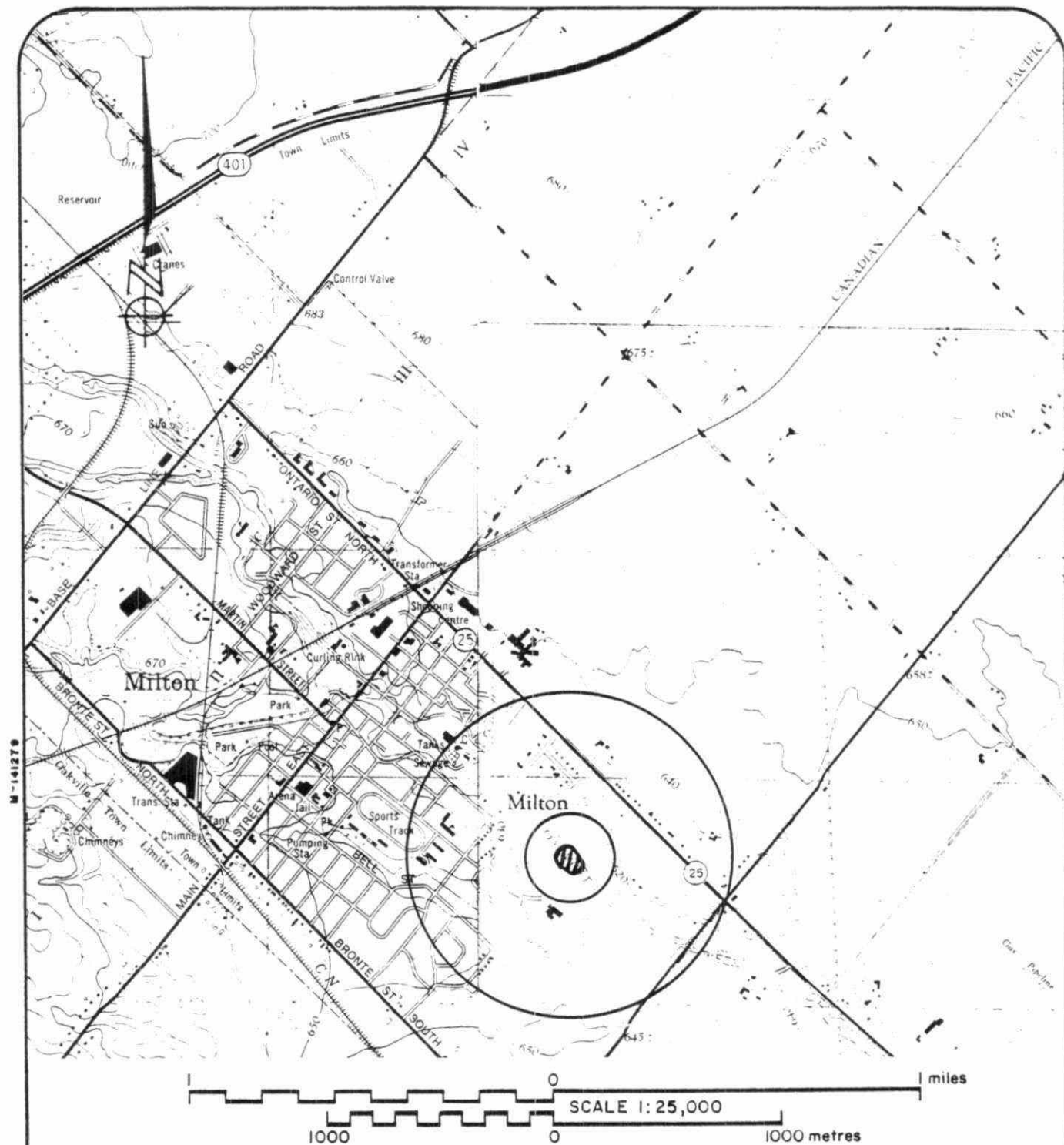
## Potential Impacts

- off-site migration of gas via sand lenses in the glacial till to the abutting homes
- discharge of leachate to Oakville Creek

## Recommendations

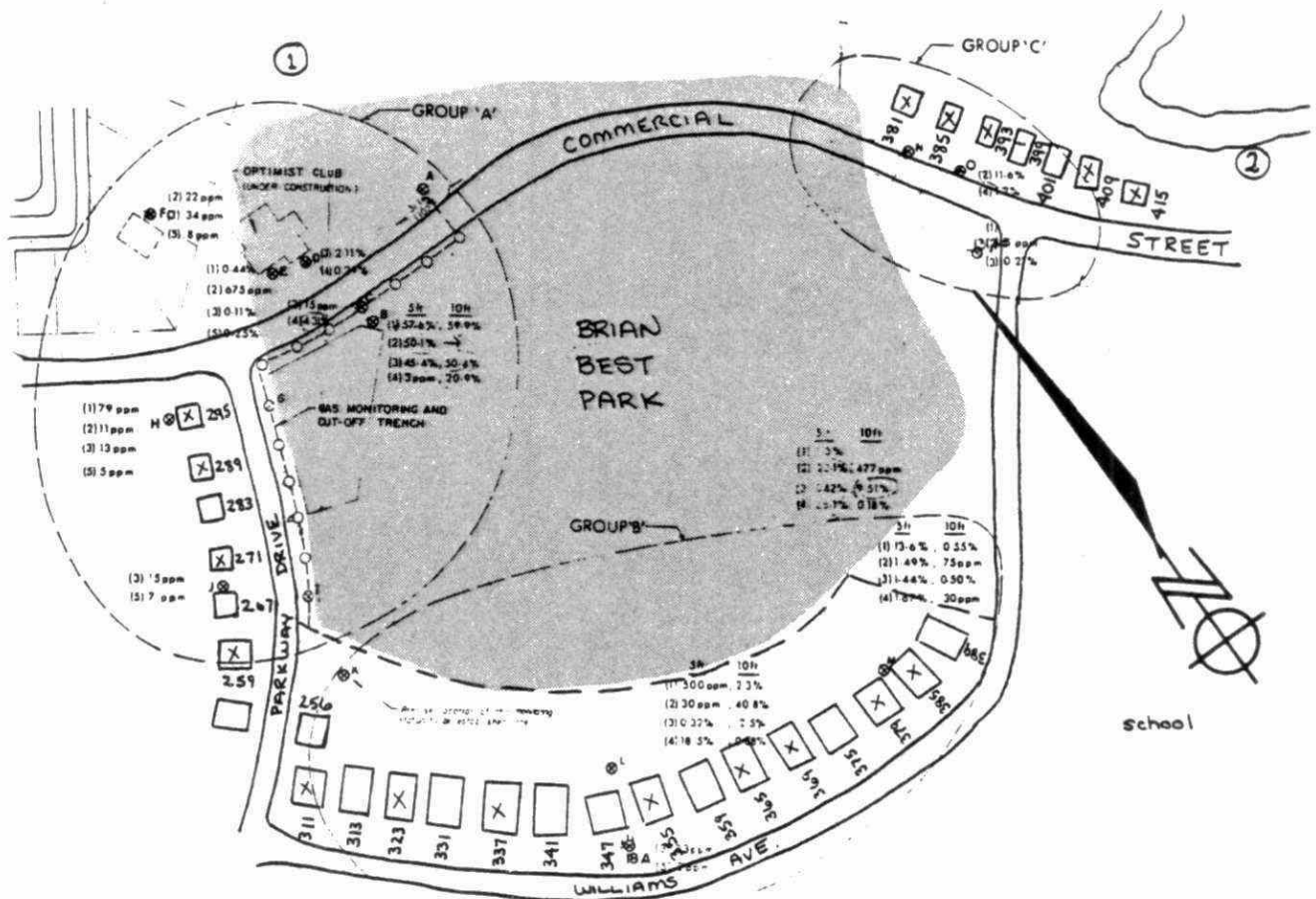
1. The disposal site and future uses should be permanently identified as follows:
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  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

| <u>LOCATION</u>                                      | <u>ESTIMATED<br/>NUMBER</u> |
|------------------------------------------------------|-----------------------------|
| - in backyard properties of Williams Avenue          | 10                          |
| - in frontyard properties on Commercial Street       | 3                           |
| - in frontyard properties on Parkway Drive           | 3                           |
| - in backyard property of the Optimist Club building | 2                           |



SITE NO. Milton  
BRIAN BEST PARK

Morrison Beatty Limited  
Gore & Storrie Limited



LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS
- GAS SAMPLE LOCATIONS
  - in field
  - in buildings

NOT TO SCALE

SITE NO. Milton  
BRIAN BEST PARK

Morrison Beatty Limited  
Gore & Storrie Limited



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of the  
Environment

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 23, 1980 SITE IDENTIFICATION CODE \_\_\_\_\_

SITE Brian Best Park, Milton  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

|                                  | 1   | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------------|-----|-----|---|---|---|---|---|---|---|----|
| 1) Chlorides                     | 153 | 183 |   |   |   |   |   |   |   |    |
| 2) pH                            | 7   | 7   |   |   |   |   |   |   |   |    |
| 3) Iron                          | 10  | 14  |   |   |   |   |   |   |   |    |
| 4) Alkalinity                    | 257 | 223 |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu\text{mhos}$ | 480 | 495 |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES NONE

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No X Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE NONE REQUIRED

###### D. BUILDINGS

| Test  | Results | Test  | Results | Name/Address                       | Results | Name/Address                        | Results |
|-------|---------|-------|---------|------------------------------------|---------|-------------------------------------|---------|
| Holes |         | Holes |         |                                    |         |                                     |         |
| #1    |         | #6    |         | 1. 389 Williams Ave. (no one home) |         | 6. 365 Williams Ave.                | 0%      |
| #2    |         | #7    |         | 2. 385 Williams Ave.               | 0%      | 7. 359 Williams Ave. (no one home)  |         |
| #3    |         | #8    |         | 3. 379 Williams Ave.               | 0%      | 8. 355 Williams Ave.                | 0%      |
| #4    |         | #9    |         | 4. 375 Williams Ave. (no one home) |         | 9. 347 Williams Ave. (no one home)  |         |
| #5    |         | #10   |         | 5. 369 Williams Ave.               | 0%      | 10. 341 Williams Ave. (no one home) |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ Page 2

SITE Brian Best, Milton con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

B. WELLS WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Test

Holes Results

Holes Results

Name/Address

Results

Name/Address

Results

#1 \_\_\_\_\_  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

1. 337 Williams Ave. 0%  
2. 331 Williams Ave. (no one home)  
3. 323 Williams Ave. 0%  
4. 313 Williams Ave. (no one home)  
5. 311 Williams Ave. 0%

6. 256 Parkway Drive (no one home)  
7. 259 Parkway Drive 0%  
8. 267 Parkway Drive (no one home)  
9. 271 Parkway Drive 0%  
10. 283 Parkway Drive (no one home)

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ministry  
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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ Page 3

SITE Brian Best Park, Milton con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

#### I Leachate

##### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

##### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

#### II Gas

##### C. ON-SITE

###### Test

Holes Results

#1 \_\_\_\_\_  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

###### Test

Holes Results

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

##### D. BUILDINGS

Name/Address

1. 289 Parkway Drive Results 0%  
2. 295 Parkway Drive Results 0%  
3. The Optimist Center  
4. Commercial St. (no one there)  
5. \_\_\_\_\_

Results

Name/Address

6. 381 Commercial St. Results 0%  
7. 385 Commercial St. Results 0%  
8. 393 Commercial St. Results 0%  
9. 399 Commercial St. (no one home)  
10. 401 Commercial St. (no one home)

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ Page 4

SITE Brian Best Park, Milton con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Test

Holes

Results

Holes

Results

Name/Address

Results

Name/Address

Results

#1 \_\_\_\_\_  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

1. 409 Commercial St.  
2. 415 Commercial St.  
3. \_\_\_\_\_  
4. \_\_\_\_\_  
5. \_\_\_\_\_

0%  
0%  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. \_\_\_\_\_  
7. \_\_\_\_\_  
8. \_\_\_\_\_  
9. \_\_\_\_\_  
10. \_\_\_\_\_

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



REGION OF PEEL

|      |                                       |
|------|---------------------------------------|
| 7021 | PALGRAVE                              |
| 7024 | REG. ROAD #11, CALEDON                |
| 7028 | CENTRE STREET, BRAMPTON               |
| 7030 | CENTENNIAL COMMUNITY CENTER, BRAMPTON |
| 7067 | DUNDAS & DIXIE, MISSISSAUGA           |
| 7069 | PORT CREDIT                           |
| 7071 | NEWMAN PIT, MISSISSAUGA               |



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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7021

Location..... PALGRAVE  
REGION OF PEEL

Morrison Beatty Limited

Gore & Storrie Limited





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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7021

LOCATION

#6 & #25 Sideroads

Palgrave

## Background

### Waste Disposal Practices

- Operated by the Town of Palgrave and used by the surrounding area in the 1950's and early 1960's.
- The site is approximately  $\frac{1}{2}$  hectare in size.
- It was closed in the mid 1960's.
- Upon closure of the site, the refuse was levelled and covered with granular material.
- Information source was Mr. Bob Gibson, nearby resident.

### Land Uses

Original - Farmland.

### Present Development

On - site - Open vacant land with no structures on the site.

### Abutting

- The site is bounded on the northwest by a ravine which discharges into a swamp.
- The site bounded on the southeast by Sideroad No. 25.

### Present Site Owner

- Canadian National Railways.

## Hydrogeologic Setting

### Geology

- regionally, the entire area is underlain by the Oak Ridges kame moraine
- overburden deposits in the moraine are generally sandy

### Regional Drainage

- the site is in the Humber River watershed and the main branch by-passes the site about 200 m to the northwest
- drainage in the upland areas around the site is good

## Disposal Site Detail

### Fill Characteristics

- the site appears to have been operated as a roadside dump, refuse was end-dumped onto a low lying area and the surface raised to road-grade
- the site has an established grass cover and has taken a very natural appearance

### Topography and Drainage

- the surface of the site has been graded smoothly, and vegetated
- there is no maintenance of the site

M-141279

## Identified Impact

### Settlement & Erosion

- settlement and erosion are not problems at this site

### Vegetation Stress

- areas of poor vegetation growth were present on the site; however it is probable that these are caused by the poor humic content of the cover and perching of groundwater

### Leachate

- no leachate was observed
- there are no streams or watercourses at the site

### Methane Gas

- no methane gas was detected at any of the five selected locations in the landfill site
- there are no buildings in the area which would require monitoring

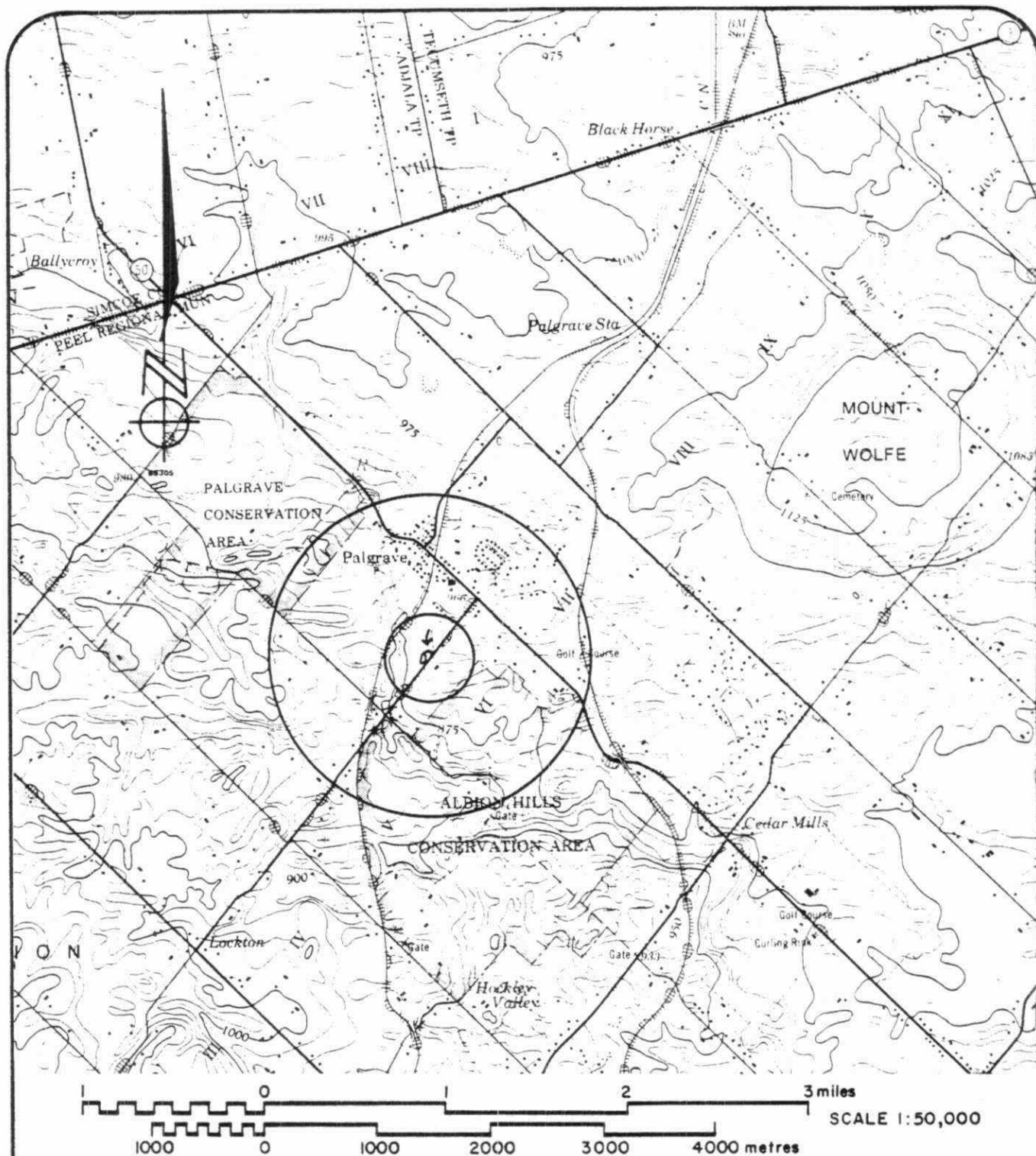
## Potential Impacts

- isolation and the absence of nearby development suggests potential methane or leachate impacts will be insignificant.

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

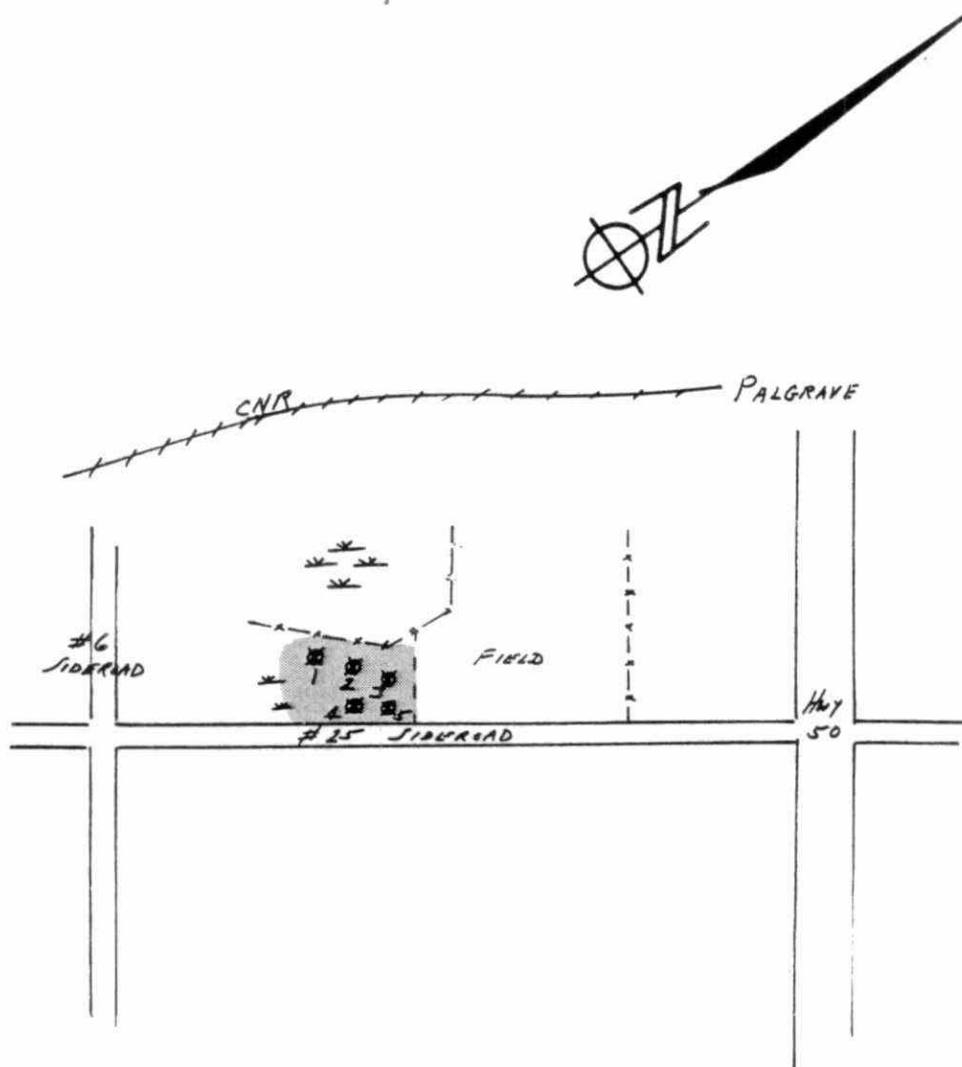
M-141276



SITE NO.7021  
# 25 SIDE RD. PALGRAVE

Morrison Beatty Limited  
Gore & Storrie Limited

M-250780



LEGEND

|                        |                                                                                       |
|------------------------|---------------------------------------------------------------------------------------|
| WASTE DISPOSAL SITE    |  |
| WATER SAMPLE LOCATIONS | ①                                                                                     |
| GAS SAMPLE LOCATIONS   |                                                                                       |
| - in field             | ⊗ 2                                                                                   |
| - in buildings         | x 2                                                                                   |

NOT TO SCALE

SITE NO. 7021  
# 25 SIDE RD. PALGRAVE

Morrison Beatty Limited  
Gore & Storrie Limited





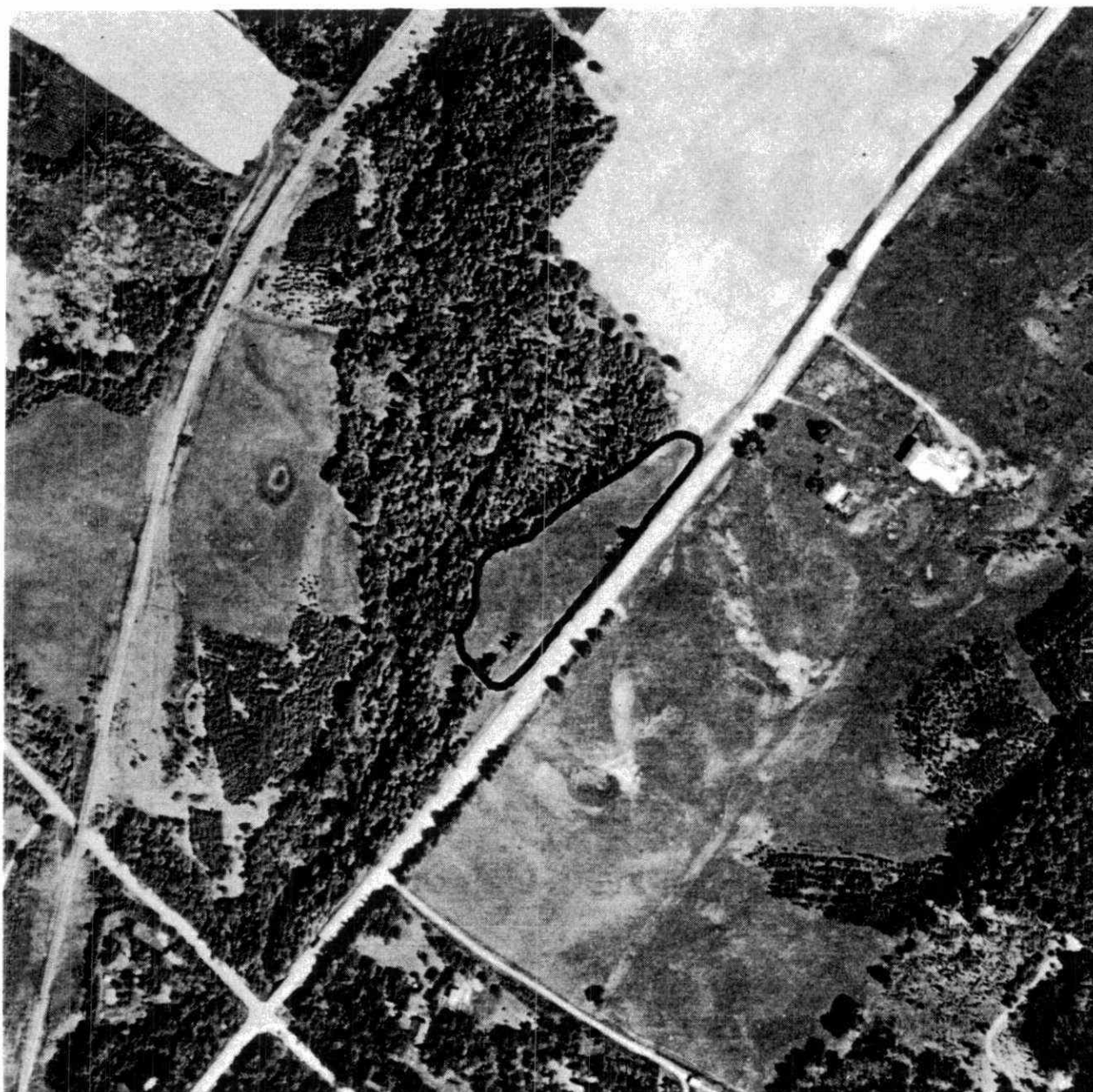
Ontario

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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7021



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA

SCALE 1:4500





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 8, 1980 SITE IDENTIFICATION CODE 7021

SITE Palgrave Sideroad No. 25, Con. 6, Lot 26  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate NONE

###### A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

###### B. WELLS WITHIN 100 METRES NONE

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No X Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

| Test  | Results   | Test  | Results | Name/Address | Results | Name/Address | Results |
|-------|-----------|-------|---------|--------------|---------|--------------|---------|
| Holes |           | Holes |         |              |         |              |         |
| #1    | <u>0%</u> | #6    |         | 1.           |         | 6.           |         |
| #2    | <u>0%</u> | #7    |         | 2.           |         | 7.           |         |
| #3    | <u>0%</u> | #8    |         | 3.           |         | 8.           |         |
| #4    | <u>0%</u> | #9    |         | 4.           |         | 9.           |         |
| #5    | <u>0%</u> | #10   |         | 5.           |         | 10.          |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7024

Location..... REG. ROAD #11  
CALEDON  
REGION OF PEEL

Morrison Beatty Limited

Gore & Storrie Limited



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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7024

LOCATION Regional

Road No. 11 and No. 4

Sideroad, Caledon

## Background

### Waste Disposal Practices

- Operated by the Town of Caledon as a municipal waste disposal site.
- The landfill is approximately 1/4 hectare in area.

### Land Uses

Original - Low lying extension to the nearby Kettle Lake.

### Present Development

On - site - Laneway to the Dalli residence.

Abutting  
North - The Dalli residence.  
West - Kettle Lake.  
East - Swamp.  
South - Regional Road No. 11.

### Present Site Owner

- C&F Dalli.

## Hydrogeologic Setting

### Geology

- the site is underlain by a stony till moraine
- the disposal site is on the edge of a kettle lake

### Regional Drainage

- drainage in the vicinity of the disposal site is toward the kettle lake

## Disposal Site Detail

### Fill Characteristics

- the fill was a roadside dump where refuse was end-dumped into a small kettle lake; the total relief on the site is about 7 m
- the surface has been vegetated and is being landscaped and maintained by the property owners

### Topography and Drainage

- the disposal site is mounded and slopes radially away from Hwy 24-
- side slopes are a maximum 1:1 at the lake edge
- drainage on the site is good

M-141279

## Identified Impact

### Settlement & Erosion

- no settlement or erosion problems.

### Vegetation Stress

- there is no vigorous vegetation growth on the site but this could be due to lack of an adequate soil cover

### Leachate

- no leachate seepages were observed, although leachate obviously discharges into the pond at the north edge of the fill,

### Methane Gas

- no methane was detected at this site

## Potential Impacts

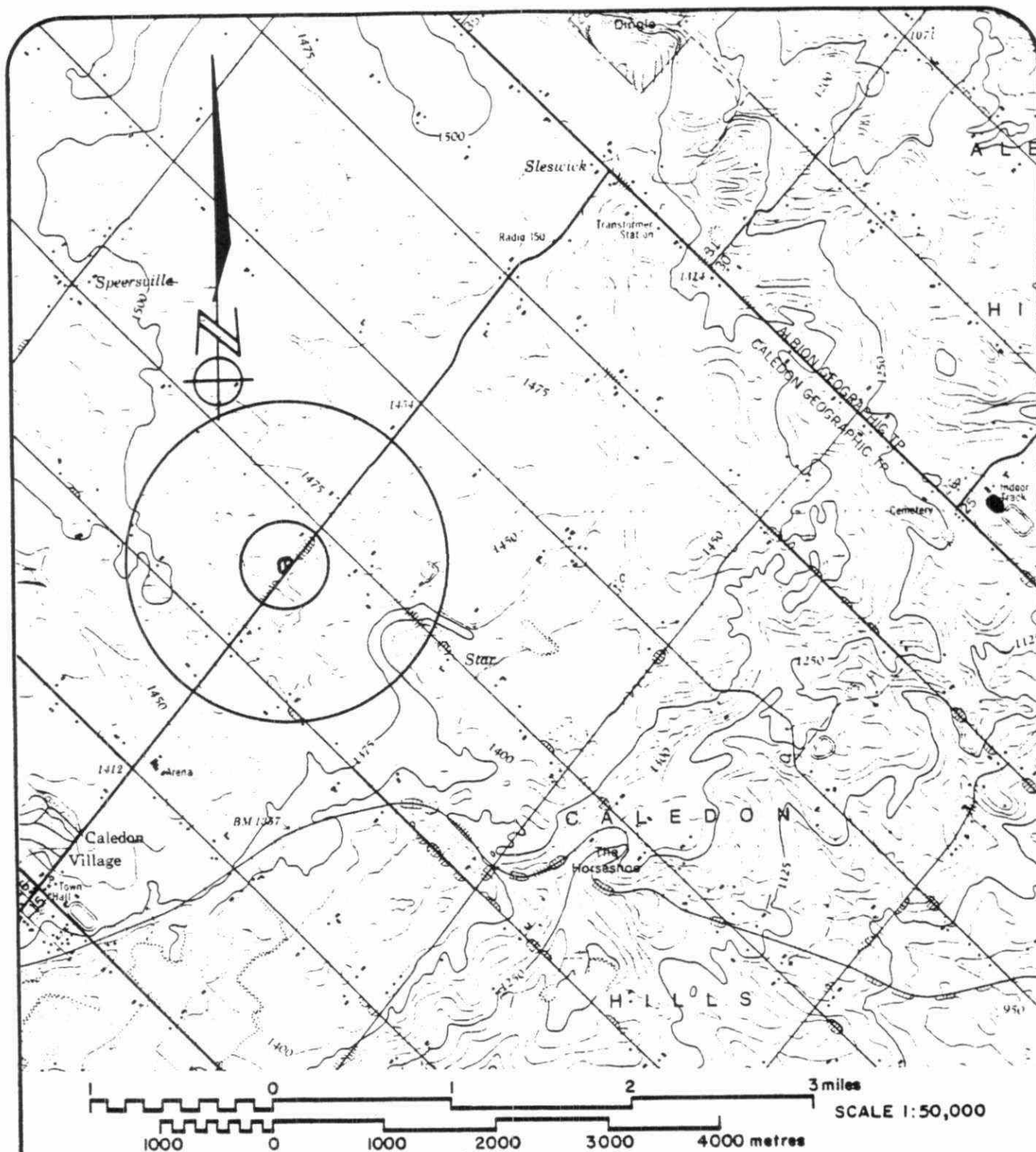
- isolation of the fill from the site owners' home suggests methane impacts will be insignificant
- leachate has not had a significant impact on the kettle lake and no potential leachate impact exist



## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
  
2. No further studies are required.

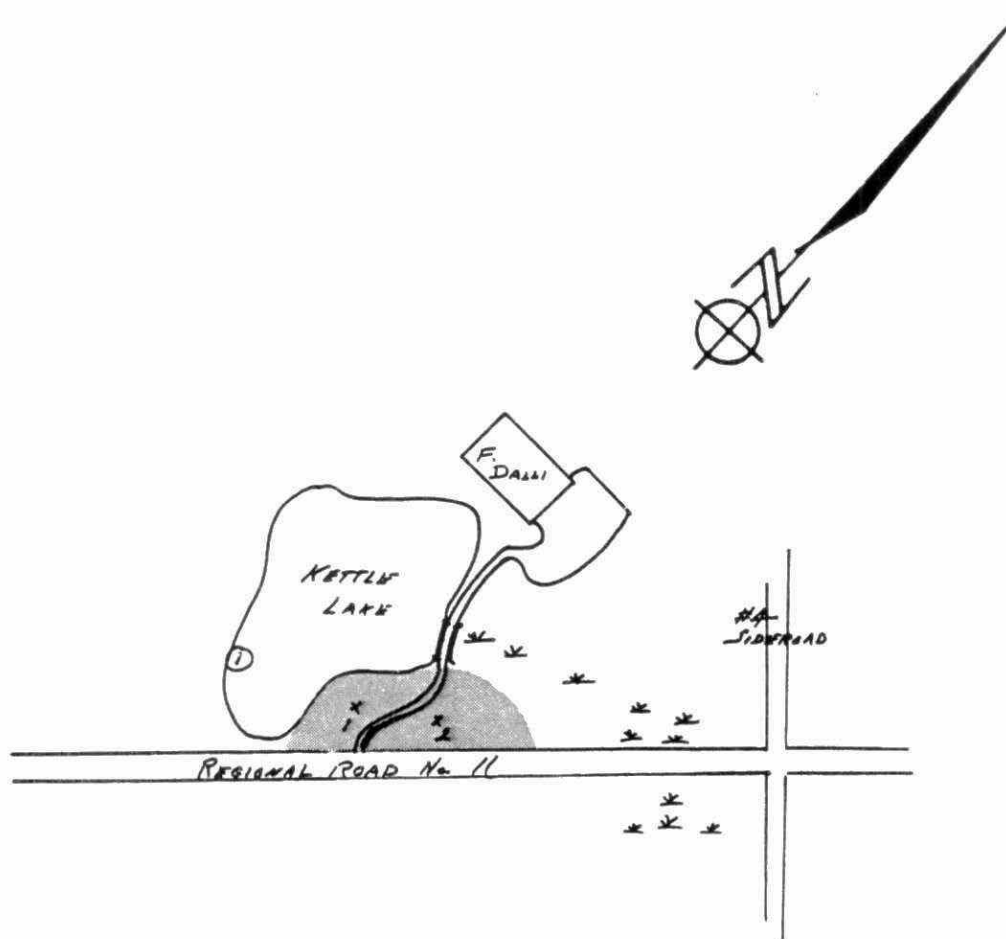
M-141279



SITE NO. 7024  
REG. RD. 11, CALEDON

Morrison Beatty Limited  
Gore & Storrie Limited

M-250780



NOT TO SCALE

SITE NO. 7024  
REG. RD. 11, CALEDON

Morrison Beatty Ltd.  
Gore & Storrie Ltd.



Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

7024



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

DISPOSAL  
AREA



SCALE 1:3330





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 7, 1980 SITE IDENTIFICATION CODE 7024  
SITE Caledon Site, Regional Rd. #11  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

|                                  | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------------|-----|---|---|---|---|---|---|---|---|----|
| 1) Chlorides mg/l                | 83  |   |   |   |   |   |   |   |   |    |
| 2) pH                            | 9.0 |   |   |   |   |   |   |   |   |    |
| 3) Iron mg/l                     | 0.5 |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l               | 143 |   |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu\text{mhos}$ | 312 |   |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No X Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### Test

###### Holes

###### Results

|    |    |
|----|----|
| #1 | 0% |
| #2 | 0% |
| #3 |    |
| #4 |    |
| #5 |    |

###### Test

###### Holes

###### Results

|     |  |
|-----|--|
| #6  |  |
| #7  |  |
| #8  |  |
| #9  |  |
| #10 |  |

###### D. BUILDINGS

###### Name/Address

|    |  |
|----|--|
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. |  |

###### Results

|  |
|--|
|  |
|  |
|  |
|  |
|  |

###### Name/Address

|     |  |
|-----|--|
| 6.  |  |
| 7.  |  |
| 8.  |  |
| 9.  |  |
| 10. |  |

###### Results

|  |
|--|
|  |
|  |
|  |
|  |
|  |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7028

Location..... CENTRE STREET  
BRAMPTON  
REGION OF PEEL

Morrison Beatty Limited

Gore & Storrie Limited





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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7028

LOCATION Centre St.  
& Haslemere Avenue  
Brampton

## Background

### Waste Disposal Practices

- Operated by the City of Brampton from 1954 to 1962 as a domestic solid wastes disposal operation.
- The site is approximately 3 hectares in area with estimated depths of 10 metres at the north end and 7 metres at the south end.
- It is estimated that 230 thousand cubic metres of material were placed in the site.
- Information sources include Mr. E. Adam, Road Foreman, City of Brampton Works Department, Mr. Dennis Warren, City of Brampton Building Department.

### Land Uses

#### Original

- Open space, floodplain of the Etobicoke Creek.
- Used to be a small lake or pond called Snell's Lake, in what is now the north end of the landfill area.

### Present Development

#### On - site

- Open space, recreational area.
- Ball diamond, tennis courts, soccer field.
- Gravel parking lot.
- Some of the houses along Centre Street may have lots backing onto the filled area as it is reported that some of them had to be constructed with special foundations.

#### Abutting

- North - CNR Railway tracks.
- East - Ten single family residences on Centre Street.
- Twelve single family residences on Haslemere Avenue.
- West - Etobicoke Creek.
- South - Wooded property.

### Present Site Owner

- Metropolitan Toronto and Region Conservation Authority.

## Hydrogeologic Setting

### Geology

- regionally, the area is blanketed by a silty clay till (Halton)
- locally, there may be thin sands deposited in the former floodplain of the Etobicoke Creek

### Regional Drainage

- the site abuts the main branch of Etobicoke Creek
- most of the surrounding upland areas east of the site are served by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the refuse is placed in former floodplain of Etobicoke Creek
- the site has grass cover which is maintained by the municipality
- the soil cover appears to be 0.3 to 0.6 m thick

### Topography and Drainage

- the site slopes gently westward toward Etobicoke Creek
- relief on the landfill is about 7 m
- the drainage is good and is directed westward toward the creek

## Identified Impact

### Settlement & Erosion

- there is no significant erosion
- settlement depressions are common over most of the site

### Vegetation Stress

- patches of decayed vegetation are evident over much of the site

### Leachate

- no evidence of leachate seepages along the toe of the fill adjacent Etobicoke Creek
- there was no measureable impact on Etobicoke Creek

### Methane Gas

- methane concentrations of up to 69% were found in the landfill
- methane was detected at 7.5% in shallow soil at rear of No. 63 Centre Street
- methane was detected in basement drains in three homes abutting the site

## Potential Impacts

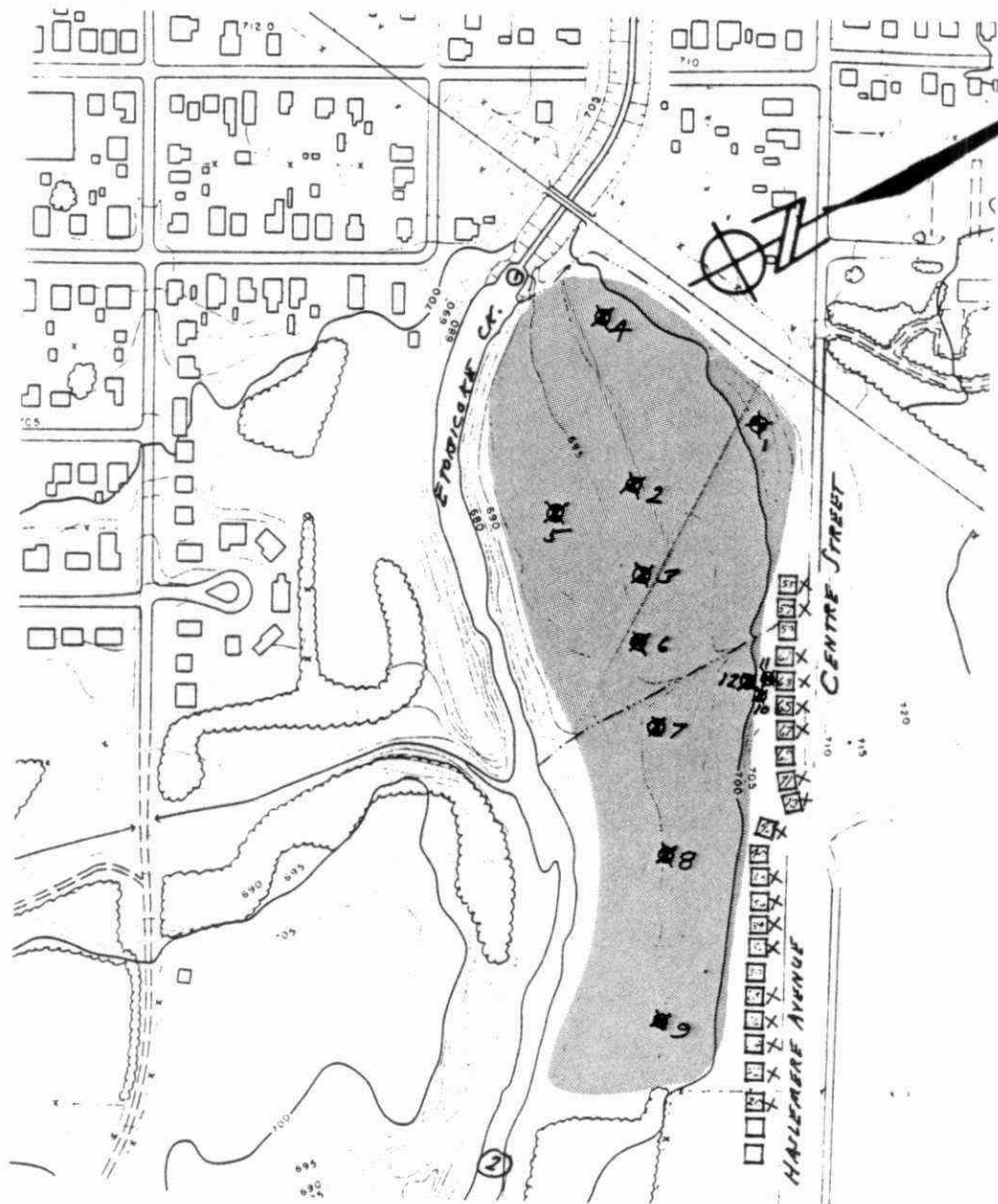
- gas migration into all abutting residences along the east boundary of the site

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses.
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the extent of off-site gas migration at the site. The following work is recommended:
  - i) immediate monitoring of methane in all homes abutting the landfill on a weekly basis
  - ii) seal unused floor drains in all affected homes
  - iii) install sub-floor gas probes in homes where methane is detected in floor drains.
  - iv) install multi-depth gas probes in back yard areas of about half the abutting lots
  - v) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May.
3. The results of the monitoring program should be assessed to determine the extent of gas migration, the potential hazards, and the need for permanent gas control.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

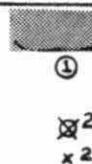
M-141278





LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS
- GAS SAMPLE LOCATIONS
  - in field
  - in buildings



SCALE 1:3670 \*

SITE NO. 7028  
CENTRE ST. BRAMPTON

Morrison Beatty Limited  
Gore & Storrie Limited





Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7028



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:6670





Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 7, 1980 SITE IDENTIFICATION CODE 7028

SITE Centre Street Landfill, Brampton  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

|                            | 1    | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|------|------|---|---|---|---|---|---|---|----|
| 1) Chlorides mg/l          | 67.5 | 61.0 |   |   |   |   |   |   |   |    |
| 2) pH                      | 9    | 9    |   |   |   |   |   |   |   |    |
| 3) Iron mg/l               | 0.5  | 0.5  |   |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l         | 226  | 211  |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 395  | 419  |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No x Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No x If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### Test

###### Holes

###### Results

|    |     |
|----|-----|
| #1 | 66% |
| #2 | 22% |
| #3 | 0%  |
| #4 | 69% |
| #5 | 64% |

###### Test

###### Holes

###### Results

|     |       |
|-----|-------|
| #6  | 0%    |
| #7  | 0%    |
| #8  | 2.75% |
| #9  | 8.0%  |
| #10 | 0%    |

###### D. BUILDINGS

###### Name/Address

###### Results

|                                           |       |
|-------------------------------------------|-------|
| 1. 55 Centre St.                          | 0%    |
| 2. 57 Centre St.                          | 0%    |
| 3. 59 Centre St. (didn't understand Eng.) |       |
| 4. 61 Centre St.                          | 0%    |
| 5. 63 Centre St., D. Marshall             | 16.5% |
| 6. 67 Centre St., J. Dixon                | 5%    |
| 7. 71 Centre St., J. Vireims              | 7%    |
| 8. 69 Centre St., (no one home)           |       |
| 9. 65 Centre St. Mr. Avbar                | 0%    |
| 10. 40 Haslemere (no admittance)          |       |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7028 - Page 2

SITE Centre St., Brampton con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test  
Holes Results  
#11 0%  
#12 7.5%  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

Test  
Holes Results  
#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

Name/Address Results  
1.42 Haslemere, G. Hazen 0%  
2.38 Haslemere 0%  
3.36 Haslemere 0%  
4.34 Haslemere, Mr. Rife 0%  
5.32 Haslemere 0%

Name/Address Results  
6.30 Haslemere (no admittance)  
7.28 Haslemere 0%  
8.26 Haslemere, Mr. Sutter 0%  
9.24 Haslemere 0%  
10.22 Haslemere, T. B. Webster 0%  
11.20 Haslemere 0%

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7030

Location..... CENTENNIAL COMMUNITY CENTER  
BRAMPTON  
REGION OF PEEL

Morrison Beatty Limited

Gore & Storrie Limited





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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7030

LOCATION

Mary & Guests Streets

Brampton

## Background

### Waste Disposal Practices

- The operation was carried out by the City of Brampton in the 1940's until 1954 as a municipal solid wastes disposal site.
- The site was used as an open dump until it was full, then an earth cover was placed on top.
- The main waste source was domestic and municipal.
- The landfill area is about 3 hectares with an estimated depth of 5 metres.
- It is estimated that 150,000 cubic metres of material were placed in the site.
- Information sources included Mr. E. Adam, Road Foreman, City of Brampton Works Department; Mr. Dennis Warren, City of Brampton Building Department.

### Land Uses

**Original** - Low lying area, flood plain of the Etobicoke Creek.

### Present Development

**On - site** - Paved parking lot of Brampton Centennial Recreation Centre.  
- John Carroll Arboretum (parkland).

**Abutting**

|       |                                                                                                                       |
|-------|-----------------------------------------------------------------------------------------------------------------------|
| North | - Brampton Centennial Recreation Centre Building.<br>- Bush area and a small channel draining to the Etobicoke Creek. |
| West  | - Mary Street.<br>- Cardinal Leger School.                                                                            |
| East  | - Etobicoke Creek.                                                                                                    |
| South | - Undeveloped land.                                                                                                   |

### Present Site Owner

- City of Brampton.

## Hydrogeologic Setting

### Geology

- regionally, the area is blanketed by a silty clay till (Halton)
- locally, there may be thin sands deposited in the Etobicoke Creek floodplain

### Regional Drainage

- the site abuts the main branch of Etobicoke Creek
- the land west of the site is serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the fill is placed in a floodplain of Etobicoke Creek
- the maximum thickness is about 5 m
- the site has a grass cover which is rough-cut by the municipality

### Topography and Drainage

- the fill surface slopes southeastward toward the creek; a 5 m high embankment forms the edge of the main fill area, however, thinner fill (2 m) covers the southeastern part of the site
- drainage on the site is good



## Identified Impact

### Settlement & Erosion

- settlement depressions were noted over most of the site

### Vegetation Stress

- obvious dead patchy areas of vegetation were numerous over the entire site

### Leachate

- no signs of leachate were found at this site
- there are no measureable effects to the water quality of Etobicoke Creek

### Methane Gas

- methane gas was detected in the landfill site at several locations
- methane concentrations of up to 63% were recorded on the site; no methane was found in the barhole placed off the site just east of the school
- no methane was detected in the two monitored buildings

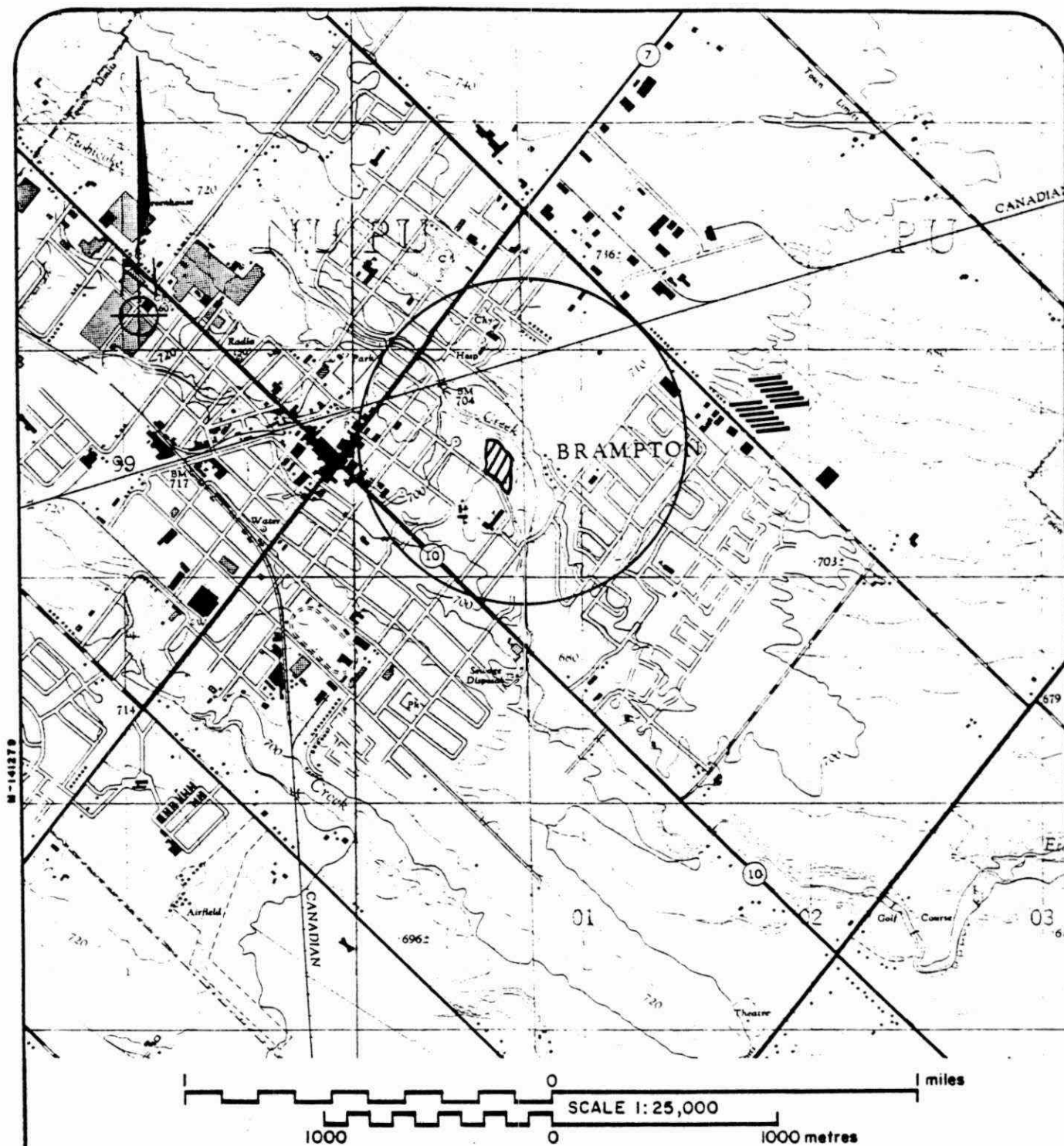
## Potential Impacts

- gas migration to the Brampton Centennial Recreation Centre to the north via sand lenses in the till or granular bedding in the service trenches
- gas migration to the Cardinal Leger School west of the site via the granular bedding beneath Mary Street or sand lenses in the till

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

| <u>LOCATION</u>                                                          | <u>ESTIMATED<br/>NUMBER</u> |
|--------------------------------------------------------------------------|-----------------------------|
| - between landfill and Brampton Centennial<br>Recreation Centre building | 4                           |
| - between landfill and Cardinal Leger School                             | 6                           |



SITE NO. 7030  
REC.CENTRE, BRAMPTON

Morrison Beatty Limited  
Gore & Storrie Limited



LEGEND

- WASTE DISPOSAL SITE 
- WATER SAMPLE LOCATIONS 
- GAS SAMPLE LOCATIONS
  - in field 
  - in buildings 

SCALE 1:3670

SITE NO. 7030  
REC. CENTRE, BRAMPTON

Morrison Beatty Limited  
Gore & Storrie Limited





Ministry  
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Environment

# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

7030



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

DISPOSAL  
AREA



SCALE 1:6670





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 7, 1980 SITE IDENTIFICATION CODE 7030  
SITE Centennial Community Centre, Mary St., Brampton  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

|                            | 1    | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|------|------|---|---|---|---|---|---|---|----|
| 1) Chlorides mg/l          | 61.0 | 61.0 |   |   |   |   |   |   |   |    |
| 2) pH                      | 9    | 9    |   |   |   |   |   |   |   |    |
| 3) Iron mg/l               | 0.5  | 0.6  |   |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l         | 211  | 210  |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 419  | 450  |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### Test

###### Holes Results

|    |     |
|----|-----|
| #1 | 0%  |
| #2 | 0%  |
| #3 | 63% |
| #4 | 36% |
| #5 | 39% |

###### Test

###### Holes Results

|     |    |
|-----|----|
| #6  | 0% |
| #7  | 0% |
| #8  | 0% |
| #9  |    |
| #10 |    |

###### D. BUILDINGS

###### Name/Address

|                                |    |
|--------------------------------|----|
| 1. Brampton Centennial Recrea- |    |
| 2. tion Centre                 | 0% |
| 3. Cardinal Leger School       | 0% |
| 4. Cardinal School addition    | 0% |
| 5.                             |    |

###### Results

###### Name/Address

|     |  |
|-----|--|
| 6.  |  |
| 7.  |  |
| 8.  |  |
| 9.  |  |
| 10. |  |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7067

Location..... DUNDAS & DIXIE  
MISSISSAUGA  
REGION OF PEEL

Morrison Beatty Limited

Gore & Storrie Limited



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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7067

LOCATION Pleasant

View Farms, 1590 Dun-  
das St., Mississauga

## Background

### Waste Disposal Practices

- Operated by a private contractor for Canox Limited who dumped waste by-products from their acetylene manufacturing operation.
- Mr. R. Dumphrie, Production Manager of Canox states that this by-product can be classified as either Calcium Hydrate or Calcium Hydroxide with the component Calcium Oxide comprising about 70 percent of the compound.
- No domestic wastes were dumped in this area.
- A 1 metre cover of clean fill was placed over the Calcium Oxide residues.
- Information source was Mr. David Pallet.

### Land Uses

Original - Farmland.

### Present Development

- On - site
- This area is now vacant land, but is zoned M2 by the City of Mississauga.
  - It appears favourable for development due to its location and adjacent rail service.
  - The CN Railway bisects the site.

#### Abutting

- North - Vacant.  
South - Little Etobicoke Creek, vacant land.  
East - Vacant land, shale quarry.  
West - Little Etobicoke Creek, industrial buildings.

### Present Site Owner

- Pleasant View Farms (a farm and garden centre).

Morrison Beatty Limited | Gore & Storrie Limited

## Hydrogeologic Setting

### Geology

- regionally, the area is underlain by grey shale of the Georgian Bay Formation
- locally, the shale is overlain by thin ( $2\pm$  m) Lake Iroquois sand deposits

### Regional Drainage

- the site is located in the watershed of the Little Etobicoke Creek, which flows south and eastward about 100 m from the disposal area
- although the general topography is flat, drainage is relatively good due to the presence of the permeable sands

## Disposal Site Detail

### Fill Characteristics

- the calcium hydroxide studies were disposed in 2 small, shallow sand sites at the rear of the Pallet farm.
- at the time of disposal, the sludges had a 50% liquid content and consequently spread into thin horizontal beds; the average depth of the waste is about 2 m
- the waste has potential uses in the fields of agriculture (to neutralize acid soils), waste treatment, water softening, etc, however production rates at CANOX are too small to economically dry material

### Topography and Drainage

- the disposal sites have been covered with sandy overburden and graded smooth
- the site is sloped slightly toward the creek and drainage is good

## Identified Impact

### Settlement & Erosion

- settlement not evident since fill area has been covered within the last 2 years
- erosion of recently added topfill has occurred due to lack of stabilizing vegetation

### Vegetation Stress

- there is very sparse vegetation cover on the two disposal areas

### Leachate

- leachate seepages were not found at the toe of the fill area or in the banks of the nearby tributary creek

### Methane Gas

- the material disposed of was calcium hydroxide; no tests for methane were conducted
- there are no buildings within 100 m of the disposal area

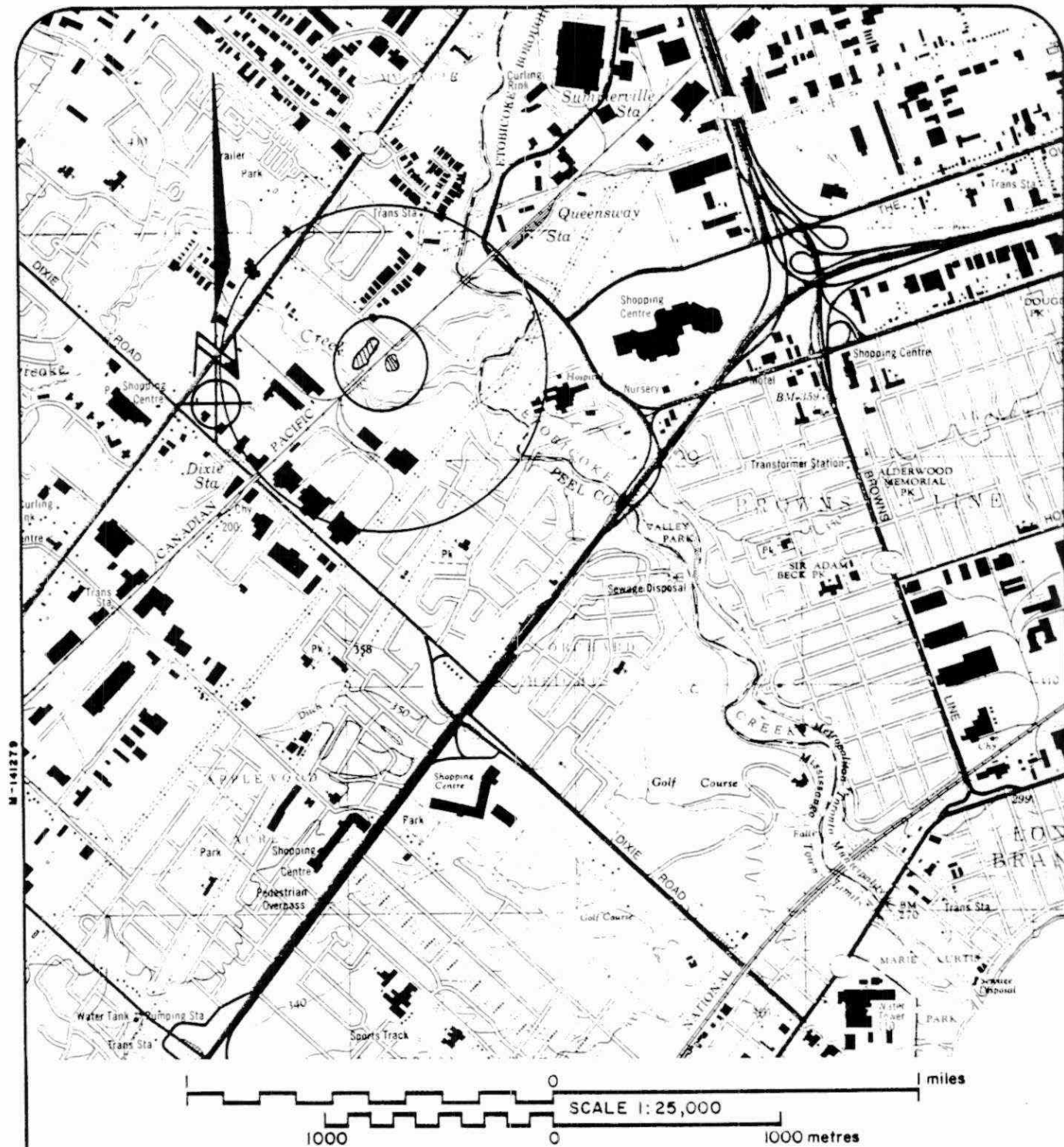
## Potential Impacts

- there are no anticipated impacts from the calcium oxide disposal site, unless building construction occurs within the fill limits

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and limited buffer zone around this site.
2. If commercial and industrial buildings, or roads, driveways and parking lots are proposed for the disposal sites, comprehensive soils investigations will be required to develop foundation and loading criteria.
3. No other impact studies of the calcium hydroxide disposal sites are required.

M-141278

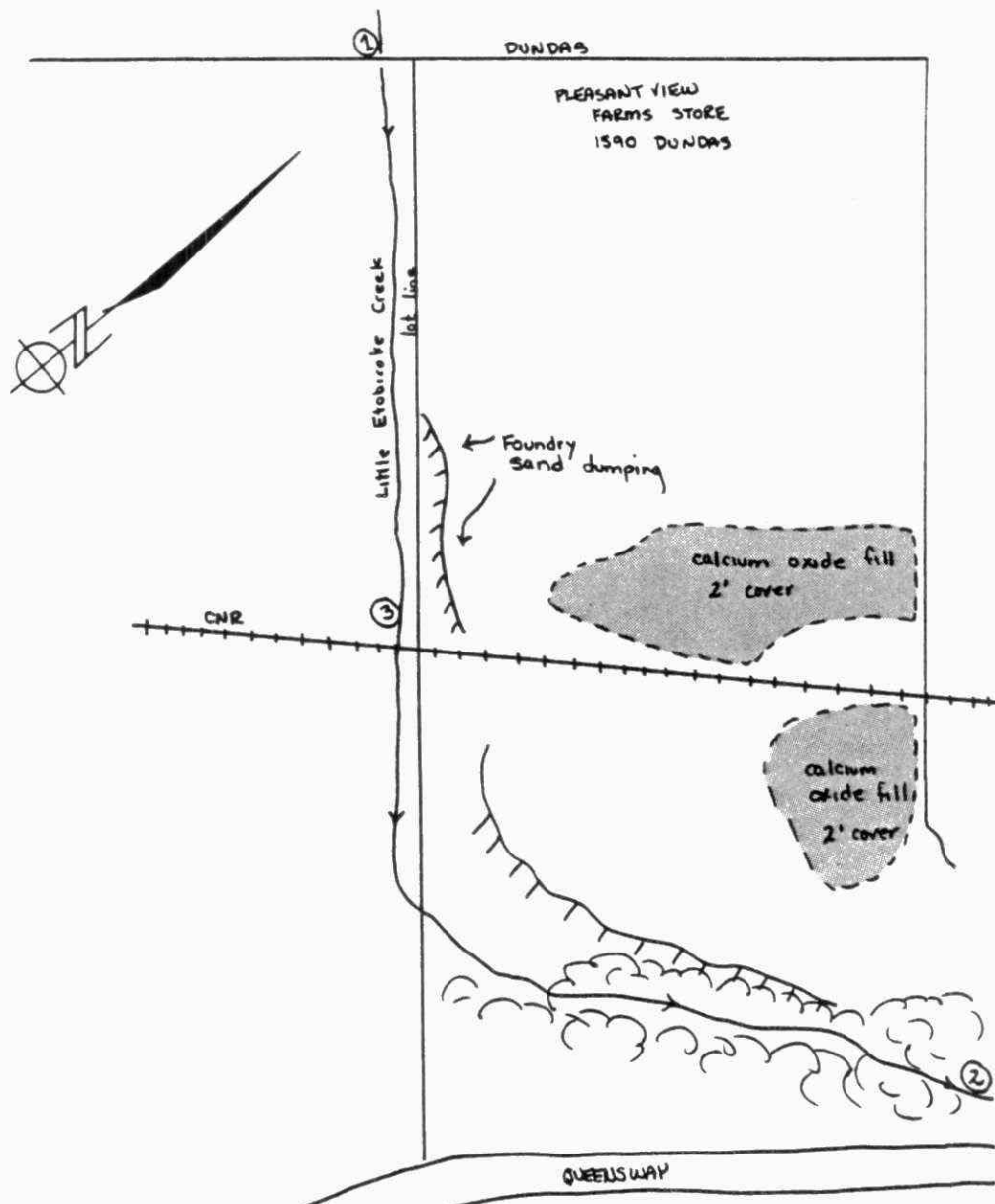


SITE NO. 7067  
MISSISSAUGA

Morrison Beatty Limited  
Gore & Storrie Limited



M-280780



LEGEND

- |                        |                                                                                      |
|------------------------|--------------------------------------------------------------------------------------|
| WASTE DISPOSAL SITE    |  |
| WATER SAMPLE LOCATIONS | ①                                                                                    |
| GAS SAMPLE LOCATIONS   |                                                                                      |
| - in field             | ⊗ 2                                                                                  |
| - in buildings         | x 2                                                                                  |

NOT TO SCALE

SITE NO. 7067  
MISSISSAUGA

Morrison Beatty Limited  
Gore & Storrie Limited



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# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7067



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:6670





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Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Sept. 29, 1980 SITE IDENTIFICATION CODE 7067  
SITE Pleasant View Farms, 1590 Dundas  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

| Parameter       | mg/l  | Results |     |   |   |   |   |   |   |   |    |
|-----------------|-------|---------|-----|---|---|---|---|---|---|---|----|
|                 |       | 1       | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides    |       | 244     | 244 |   |   |   |   |   |   |   |    |
| 2) pH           |       | 7       | 7   |   |   |   |   |   |   |   |    |
| 3) Iron         |       | .10     | .10 |   |   |   |   |   |   |   |    |
| 4) Alkalinity   |       | 240     | 205 |   |   |   |   |   |   |   |    |
| 5) Conductivity | µmhos | 700     | 700 |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

| Parameter           | Results |   |   |   |   |   |   |   |   |    |
|---------------------|---------|---|---|---|---|---|---|---|---|----|
|                     | 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides        |         |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |         |   |   |   |   |   |   |   |   |    |
| 3) Iron             |         |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |         |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |         |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No X Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas - SEE FIELD NOTES

###### C. ON-SITE

| Test  | Results     | Test  | Results |
|-------|-------------|-------|---------|
| Holes |             | Holes |         |
| #1    | <u>N.A.</u> | #6    |         |
| #2    |             | #7    |         |
| #3    |             | #8    |         |
| #4    |             | #9    |         |
| #5    |             | #10   |         |

###### D. BUILDINGS

| Name/Address                        | Results | Name/Address | Results |
|-------------------------------------|---------|--------------|---------|
| 1. <u>No Buildings Within 100 m</u> |         | 6. _____     |         |
| 2. _____                            |         | 7. _____     |         |
| 3. _____                            |         | 8. _____     |         |
| 4. _____                            |         | 9. _____     |         |
| 5. _____                            |         | 10. _____    |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie

## LABORATORY ANALYSIS

| MOE REGION | CENTRAL REGION | DATE | SITE IDENTIFICATION CODE | 7067 |
|------------|----------------|------|--------------------------|------|
|------------|----------------|------|--------------------------|------|

SITE Mississauga, Pleasant View Farms  
(Lot, concession #, or UTM coordinates, name, address)

A. WATER BODIES WITHIN 100 METRES  
(2 litre samples)

## Parameter

## Results

[illegible]

B. WELLS WITHIN 100 METRES  
(2 litre samples)

## Parameter

## Results

[illegible]

Analyst \_\_\_\_\_  
Name of Laboratory Gore & Storrie Lab

Any significant odour problems? Yes \_\_\_\_\_ No X

Recommend abatement or pertinent studies \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by Nancy Rennie





Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7069

Location..... PORT CREDIT  
REGION OF PEEL

Morrison Beatty Limited

Gore & Storrie Limited



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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7069

LOCATION Lakeshore

Rd. (Memorial Park)

Port Credit

## Background

### Waste Disposal Practices

- Operated by the Town of Port Credit in the 1950's and closed in 1962.
- The waste source is mainly domestic.
- The site is about 3 hectares in area and its estimated at a peak depth of 3 metres.
- Information source was a librarian of the Port Credit Library.

### Land Uses

**Original** - Low, wet, undeveloped flood plain land of the Credit River.

### Present Development

**On - site**

- Memorial Park (includes baseball diamond and recreation field).
- Library and adjacent parking lot.
- Portion of Church property.

**Abutting**

North - CNR railway tracks.  
East - Arena, Church and commercial and residential buildings along Stavebank Road.  
West - Credit River.  
South - Lakeshore Road and a marina.

### Present Site Owner

- Town of Port Credit.



## Hydrogeologic Setting

### Geology

- regionally, the area is underlain by clayey silt till
- locally, the till is blanketed by thin deposits of Lake Iroquois sands

### Regional Drainage

- the site abuts the east bank of the Credit River
- some upland drainage flows onto the site; however, most upland areas east of the site are served by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the fill was placed in an extensive marshland area adjacent the river
- the average depth of fill is 3 m, however greater fill depths were achieved along the original bluff on the east side of the site
- the site is vegetated with grass and is landscaped and maintained for recreational uses

### Topography and Drainage

- the site slopes slightly westward, toward the river
- there is very little relief on the site (< 4 m)
- drainage at the site appears to be good except in the library parking lot where depressions pond water after rainfall

M-141279

## Identified Impact

### Settlement & Erosion

- significant signs of settlement occur in the lawn west of the church and school, the library access roads and parking lot, as well as settlement depressions throughout the entire park
- considerable settlement of the sidewalk and entrance steps has occurred at the library, which is built on a pile foundation

### Vegetation Stress

- vegetation stress was severe in the north half of the site, although patches of decayed vegetation were also noted in the south half

### Leachate

- leachate was found seeping into the Credit River at the base of a storm culvert which traverses the site; an analysis was done on this leachate
- the water quality of the river has not been significantly affected

### Methane Gas

- methane gas was detected along a settlement crack approximately 12 m from the church and school at 24 Stavebank Drive and at a location immediately west of the Port Credit library
- no methane was found in any of the monitored buildings

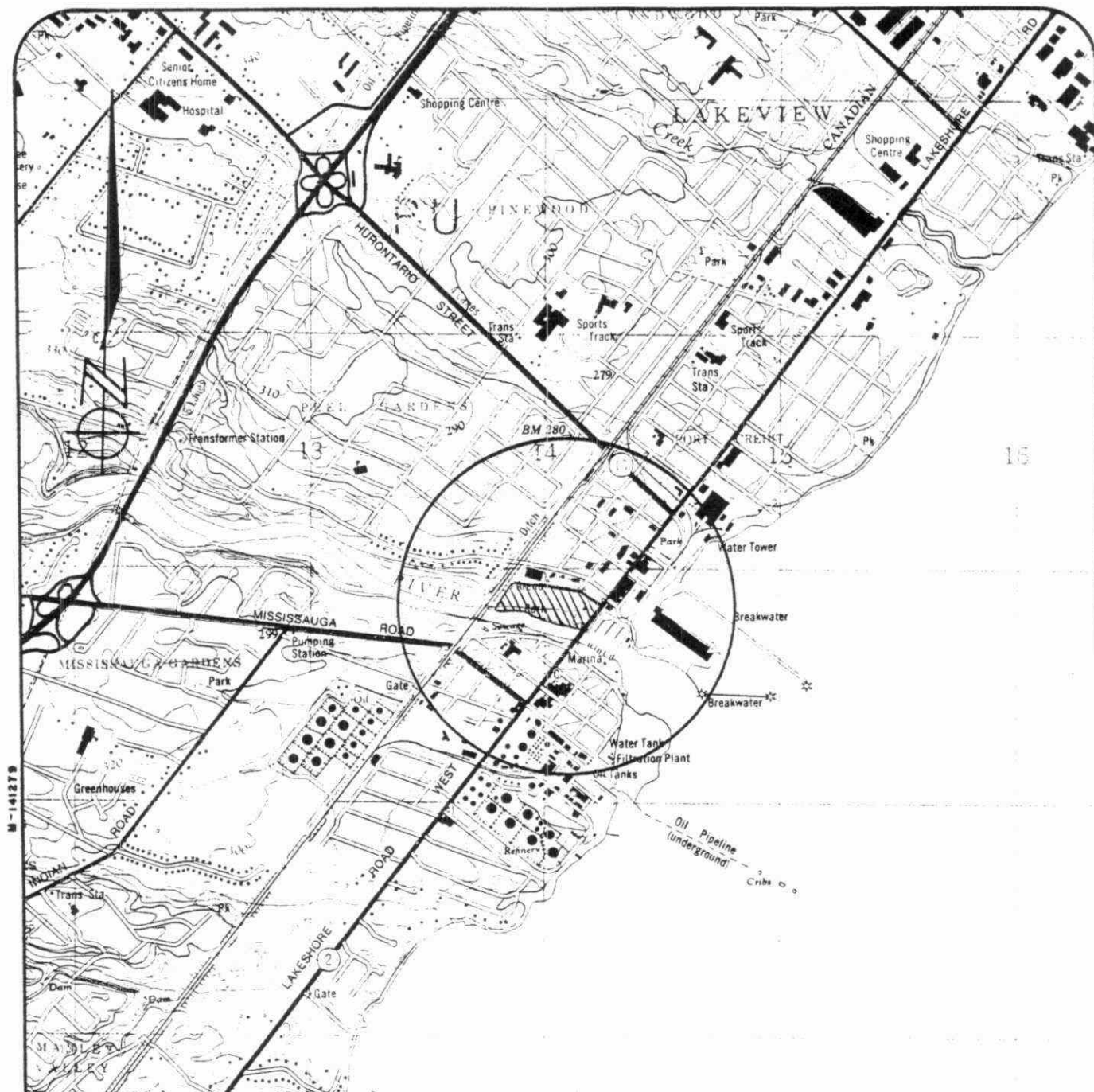
## Potential Impacts

- gas migration into Port Credit Library which is built on top of the fill area
- gas migration from the site into abutting buildings on Stavebank Drive via permeable sand deposits around the east boundary of the site

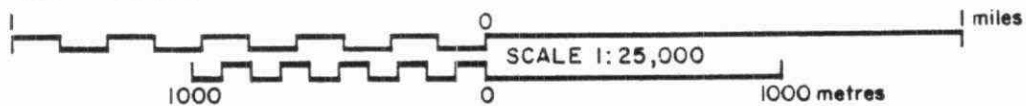
## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.
5. A comprehensive analysis of leachate collected from the identified seepage points should be conducted.

| <u>LOCATION</u>                                                                            | <u>ESTIMATED<br/>NUMBER</u> |
|--------------------------------------------------------------------------------------------|-----------------------------|
| - around the foundation of the Port Credit Library                                         | 6                           |
| - between the landfill and the buildings on Stavebank Road (no's 6, 8, 10, 12, 14, and 16) | 6                           |
| - between the landfill and abutting church and school buildings                            | 6                           |

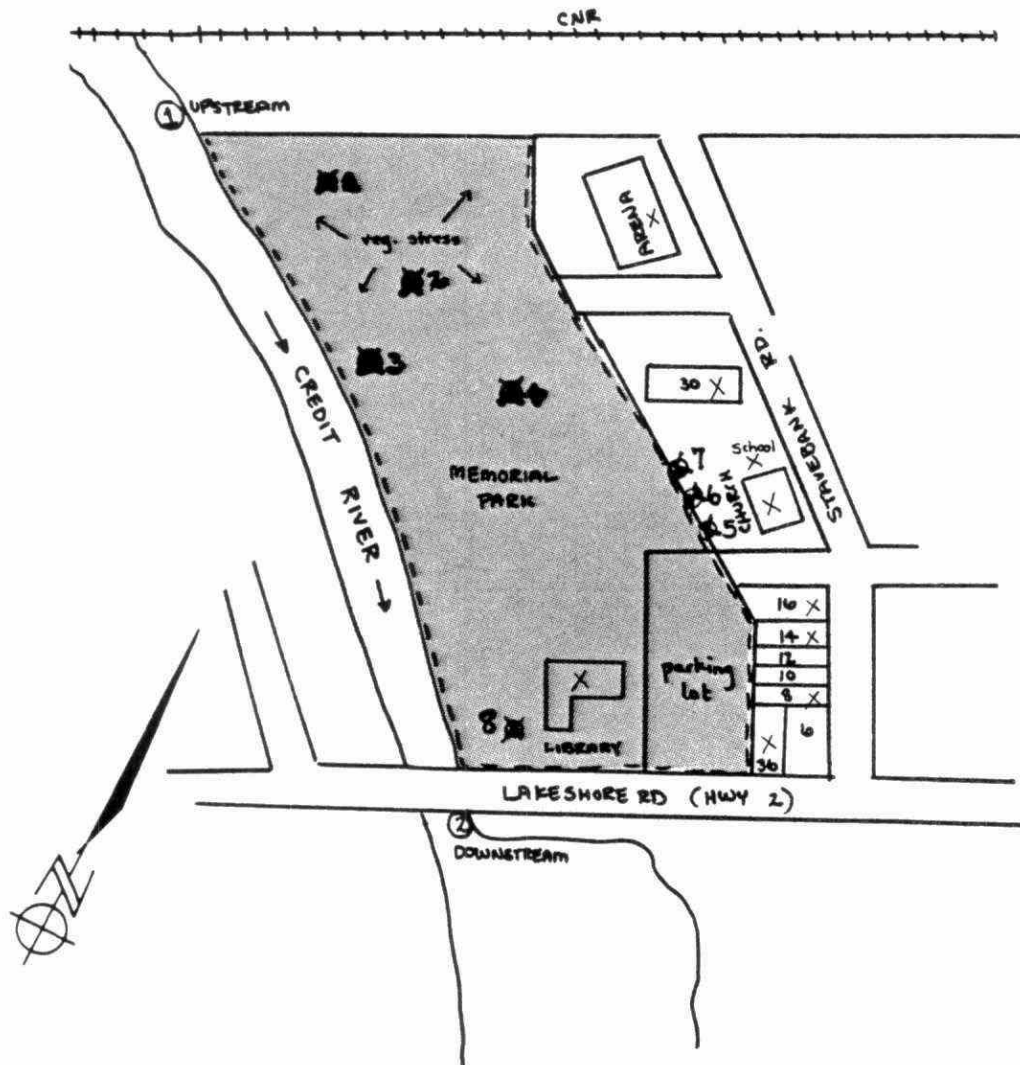


M-141279



SITE NO. 7069  
PORT CREDIT

Morrison Beatty Limited  
Gore & Storrie Limited



LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS ①
- GAS SAMPLE LOCATIONS
  - in field ⊗ 2
  - in buildings x 2

NOT TO SCALE

SITE NO. 7069  
PORT CREDIT

Morrison Beatty Limited  
Gore & Storrie Limited





Ministry  
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Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7069



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500







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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Sept. 29, 1980 SITE IDENTIFICATION CODE 7069

SITE Port Credit Memorial Park  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

| Parameter                  | mg/l | Results |     |     |   |   |   |   |   |   |    |
|----------------------------|------|---------|-----|-----|---|---|---|---|---|---|----|
|                            |      | 1       | 2   | 3   | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides               |      | 122     | 122 | 397 |   |   |   |   |   |   |    |
| 2) pH                      |      | 7       | 7   | -   |   |   |   |   |   |   |    |
| 3) Iron                    |      | .12     | .08 | .78 |   |   |   |   |   |   |    |
| 4) Alkalinity              |      | 712     | 205 | 514 |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos |      | 390     | 390 | -   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

| Parameter           | Results |   |   |   |   |   |   |   |   |    |
|---------------------|---------|---|---|---|---|---|---|---|---|----|
|                     | 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides        |         |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |         |   |   |   |   |   |   |   |   |    |
| 3) Iron             |         |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |         |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |         |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

| Test  | Results | Test  | Results |
|-------|---------|-------|---------|
| Holes |         | Holes |         |
| #1    | 0%      | #6    | 25%     |
| #2    | 0%      | #7    | 42%     |
| #3    | 0%      | #8    | 35%     |
| #4    | 0%      | #9    |         |
| #5    | 48%     | #10   |         |

###### D. BUILDINGS

| Name/Address                  | Results | Name/Address                           | Results |
|-------------------------------|---------|----------------------------------------|---------|
| 1. Port Credit Arena          | 0%      | 6. 12 Stavebank (no one home)          |         |
| 2. 30 Stavebank               | 0%      | 7. 8 Stavebank                         | 0%      |
| 3. Port Credit Library        | 0%      | 8. 6 Stavebank, Dentist (no one there) |         |
| 4. D.F. Skinner Architects    | 0%      | 9. 36 Lakeshore Rd.                    | 0%      |
| 5. Hutone Cleaners, 14 Stave- | 0%      | 10. Church and School, 24 Stavebank    | 0%      |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_ bank

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7071

Location.....  
NEWMAN PIT  
MISSISSAUGA  
REGION OF PEEL

Morrison Beatty Limited

Gore & Storrie Limited



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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7071  
LOCATION Spring-  
bank Rd. (Newman Site  
Mississauga

## Background

### Waste Disposal Practices

- Operated by the City of Mississauga and Ontario Hydro as a domestic/commercial waste disposal area in the 1960's.
- The southern half of the site was filled with domestic and commercial refuse and the northern half with fly ash from Ontario Hydro's Lakeview Generating Station.
- The site is approximately 6 hectares in area and 15 metres in depth.

### Land Uses

**Original** - A sand and gravel quarry.

### Present Development

**On - site**

- The eastern half of the landfill is parkland which includes a parking lot.
- The western half of the landfill is vacant undeveloped land.

**Abutting**

- North - Residential houses along Portway Avenue.
- West - Residential houses.
- East - Residential houses and an orchard.
- South - Residential houses along Springbank Road.

### Present Site Owner

- City of Mississauga.

## Hydrogeologic Setting

### Geology

- the site is underlain by thick Lake Iroquois beach deposits of sand and gravel; the deposits have a high permeability
- the water table is about 14 m below ground
- detailed analysis of the deposits are presented in a report by Morrison Beatty Limited (1980) on a gas migration research project about 200 m northwest of the site

### Regional Drainage

- the site is within the watershed of the Credit River
- although the topography in the area is relatively flat, the drainage is good because of permeable sand and gravel overburden

## Disposal Site Detail

### Fill Characteristics

- the fill occupies a worked-out sand and gravel pit; the pit was L-shaped
- the northern part of the pit was filled to grade with fly ash from Ontario Hydro's Lakeview Plant; the balance was filled to grade with refuse
- the site is vegetated and rough-cut several times per year

### Topography and Drainage

- the fill is smoothly graded and relatively flat
- extensive settlement has lowered the overall surface by up to one metre
- it appears that very little runoff leaves the site; most likely infiltrates into the refuse

## Identified Impact

### Settlement & Erosion

- settlement cracks were noted around the outer limits of the fill; numerous extensive settlement depressions were observed over the entire fill area
- erosion is not a problem at this site

### Vegetation Stress

- there are patchy areas of vegetation stress over much of the site
- grapevines have died along the property fenceline along the south side of the site

### Leachate

- leachate seepage is not a problem at this site

### Methane Gas

- methane gas was detected in concentrations of up to 35% in the landfill site
- comprehensive gas monitoring at the nearby Mississauga landfill site shows that high concentration methane migrates laterally through the full thickness of unsaturated sands; lateral methane migration of up to 100 m has been observed
- no methane was detected in any of the monitored homes

## Potential Impacts

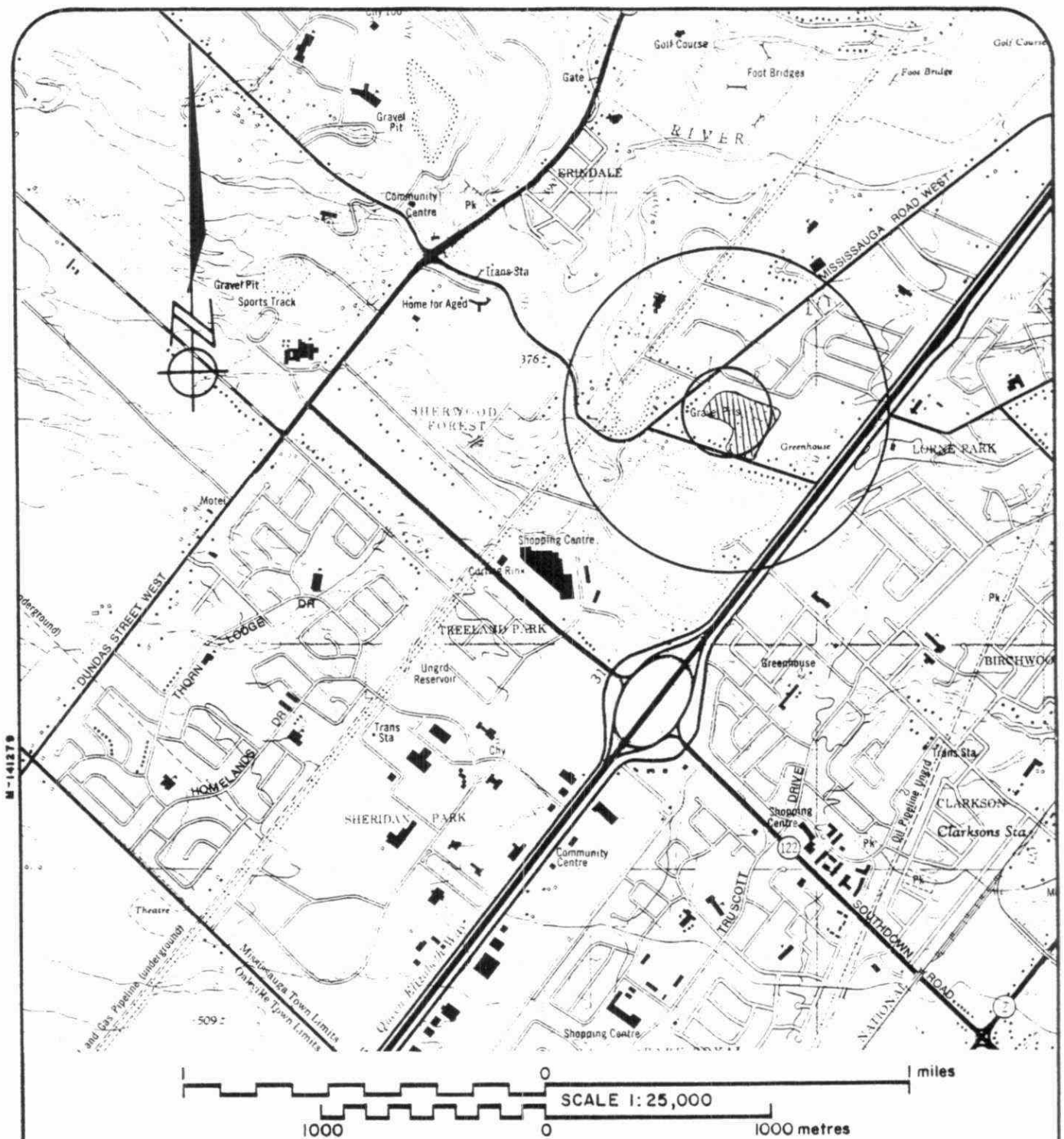
- gas migration to abutting residences on Springbank Drive, Tipperary Crescent and Portway Crescent via the deep, permeable gravel deposit which borders the landfill

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact, and
  - iv) minimum buffer zones for future development around the site.

| <u>LOCATION</u>                                                                                        | <u>ESTIMATED<br/>NUMBER</u>       |
|--------------------------------------------------------------------------------------------------------|-----------------------------------|
| - between edge of fill and homes on Springbank Road (no's 2092, 2102, 2114, 2132, 2147, 2153 and 2163) | 7<br>(at depths of 2, 8 and 14 m) |
| - between edge of fill and homes on Tipperary Crescent (no's 1590, 1600 and 1610)                      | 3<br>(at depths of 2, 8 and 14 m) |
| - between edge of fill and homes on Portway Drive (no's 2160, 2170, 2180, 2190, 2200 and 2210)         | 6<br>(at depths of 2, 8 and 14 m) |

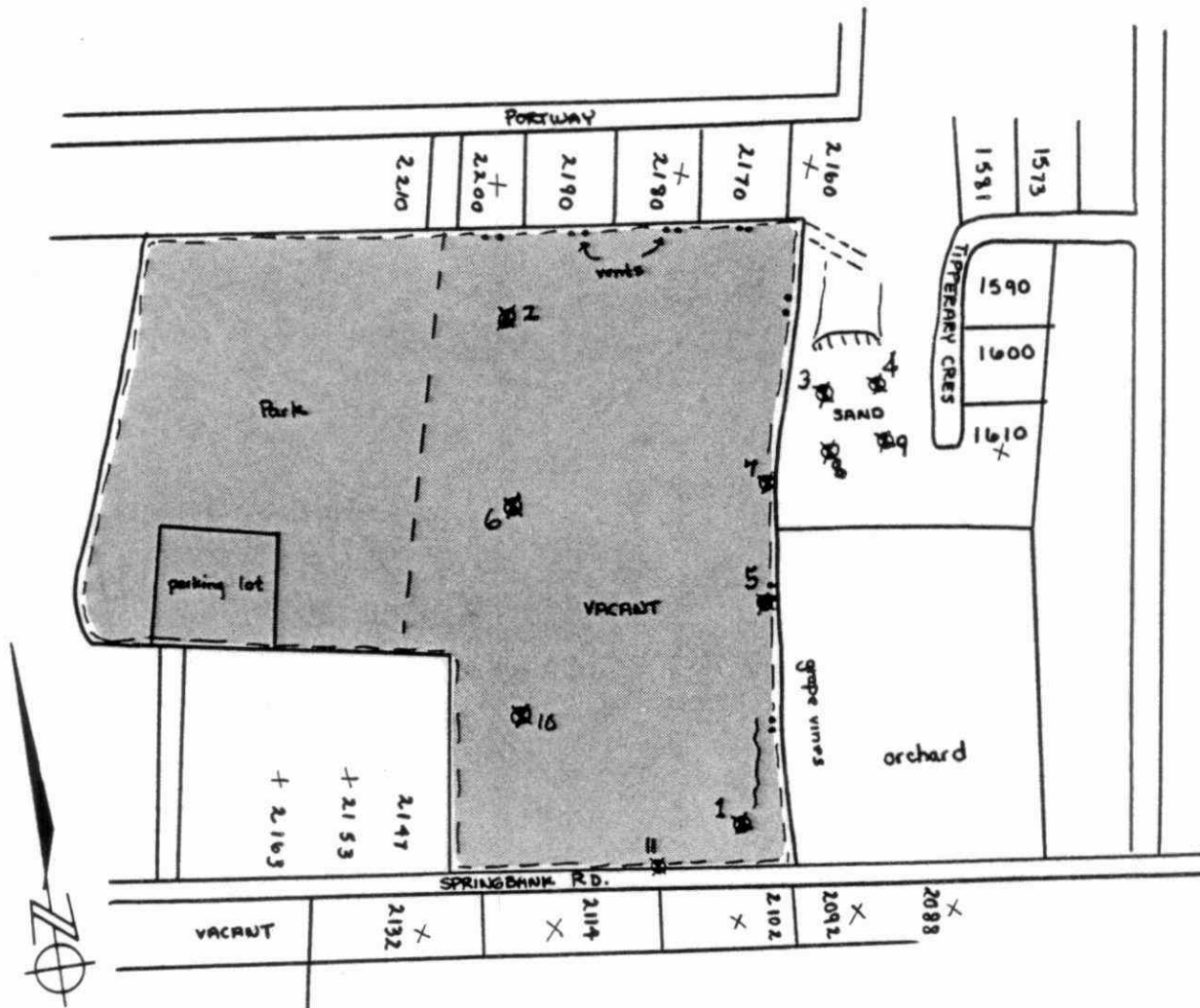




SITE NO. 7071  
MISSISSAUGA

Morrison Beatty Limited  
Gore & Storrie Limited

M-250780



LEGEND

WASTE DISPOSAL SITE

WATER SAMPLE LOCATIONS

GAS SAMPLE LOCATIONS

- in field

- in buildings

①

⊗ 2

x 2

NOT TO SCALE

SITE NO. 7071  
MISSISSAUGA

Morrison Beatty Limited  
Gore & Storrie Limited



Ministry  
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Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7071



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:6670





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Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Sept. 29, 30, 1980 SITE IDENTIFICATION CODE 7071  
SITE Newman Pit, Mississauga  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No X Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

Test Sept. 3/80

Test Sept. 29/80

Holes Results  
#1 20%  
#2 10%  
#3 1.25%  
#4 1.0%  
#5 35%

Holes Results  
#6 26%  
#7 27%  
#8 8%  
#9 0%  
#10 0%

Name/Address Results  
1. 2102 Springbank Dr. 0%  
2. 2092 Springbank Dr. 0%  
3. 2114 Springbank Dr. 0%  
4. 2132 Springbank Dr. 0%  
5. 2153 Springbank Dr. 0%

Name/Address Results  
6. 2163 Springbank Dr. 0%  
7. 2088 Springbank Dr. 0%  
8. 1610 Tipperary Cres. 0%  
9. 1600 Tipperary Cres. (no one home)  
10. 1590 Tipperary Cres. (no one home)

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7071 - Page 2

SITE Newman Pit con't.  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

B. WELLS WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

#1 0%  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

Test

Holes Results

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

Name/Address

1. 1581 Tipperary Cres. (no one home)  
2. 1573 Tipperary Cres. (no one home)  
3. 2210 Portway (no one home)  
4. 2200 Portway 0%  
5. 2190 Portway (no one home)

Results

Name/Address

6. 2180 Portway 0%  
7. 2170 Portway (no one home)  
8. 2160 Portway 0%  
9. \_\_\_\_\_  
10. \_\_\_\_\_

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie

REGION OF YORK

|      |               |
|------|---------------|
| 7006 | RICHMOND HILL |
| 7009 | OAK RIDGES    |
| 7015 | NEWMARKET     |





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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7006

Location..... RICHMOND HILL  
REGION OF YORK

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7006

LOCATION

Centre & Pugsley

Richmond Hill

## Background

### Waste Disposal Practices

- Operated by the Town of Richmond Hill as a waste disposal site.
- Richmond Hill Works Commission was not aware of this site (letter of April 5, 1979 to the Ministry of the Environment). However, employees of United Flexible knew it had existed.
- It's believed that large quantities of material from the reconstruction of Yonge Street are disposed of in this area.
- There is visible evidence of asphalt pieces jutting out of the ground as well as signs of settling within the area.
- The United Flexible building was actually constructed on the fill and built in 1953. This would imply that the site is in excess of 27 years old.
- The area of the site is 8 hectares. The fill is deposited to a depth of

**Land Uses** 7-8 metres in some areas.

#### Original

- Appears to have been a brick manufacturing plant on site at an earlier time.

## Present Development

#### On - site

- Buildings of United Flexible Limited.
- Town of Richmond Hill Public Works Department buildings and parking storage yard.

#### Abutting

- North - Industrial buildings.
- East - Industrial buildings and CNR rail line.
- West - Pugsley Avenue, playground and arena.
- South - Industrial buildings.

## Present Site Owner

- United Flexible Limited.
- Town of Richmond Hill.

Morrison Beatty Limited | Gore & Storrie Limited

## Hydrogeologic Setting

### Geology

- regionally, the area is blanketed with a clayey, silt till (Halton)

### Regional Drainage

- the site abuts a tributary to the East Don River; the eastern portion of the fill site has been deposited over the floodplain of the creek
- the entire area surrounding the site is serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the fill beneath the Richmond Hill Works Department yard has been compacted (from truck traffic and sand piles) to a depth of about 2 m
- the eastern portion of the fill (east of the stream) is slightly mounded and poorly vegetated; refuse depths in this area appear to be up to 7-8 m

### Topography and Drainage

- the Works Department yard has been smoothly graded; relief on the eastern mounded fill is about 3 m
- virtually all drainage from the site is to the tributary of the East Don River which flows through the central area

## Identified Impact

### Settlement & Erosion

- there are some settlement cracks and depressions in the vacant lot east of the small creek
- some erosion has occurred from the Richmond Hill Works Department sand piles into the creek

### Vegetation Stress

- there are a few areas where a good quality grass cover is maintained, but there were no signs of vegetation stress
- poor cover conditions are responsible for the unhealthy vegetation in the vacant portions of the site

### Leachate

- leachate was observed trickling from the base of a culvert beneath the site and along the creek bank
- a significant increase in chlorides was observed downstream of the site

### Methane Gas

- methane gas was not detected in the four barhole locations in the landfill site
- no methane was found in any of the monitored buildings

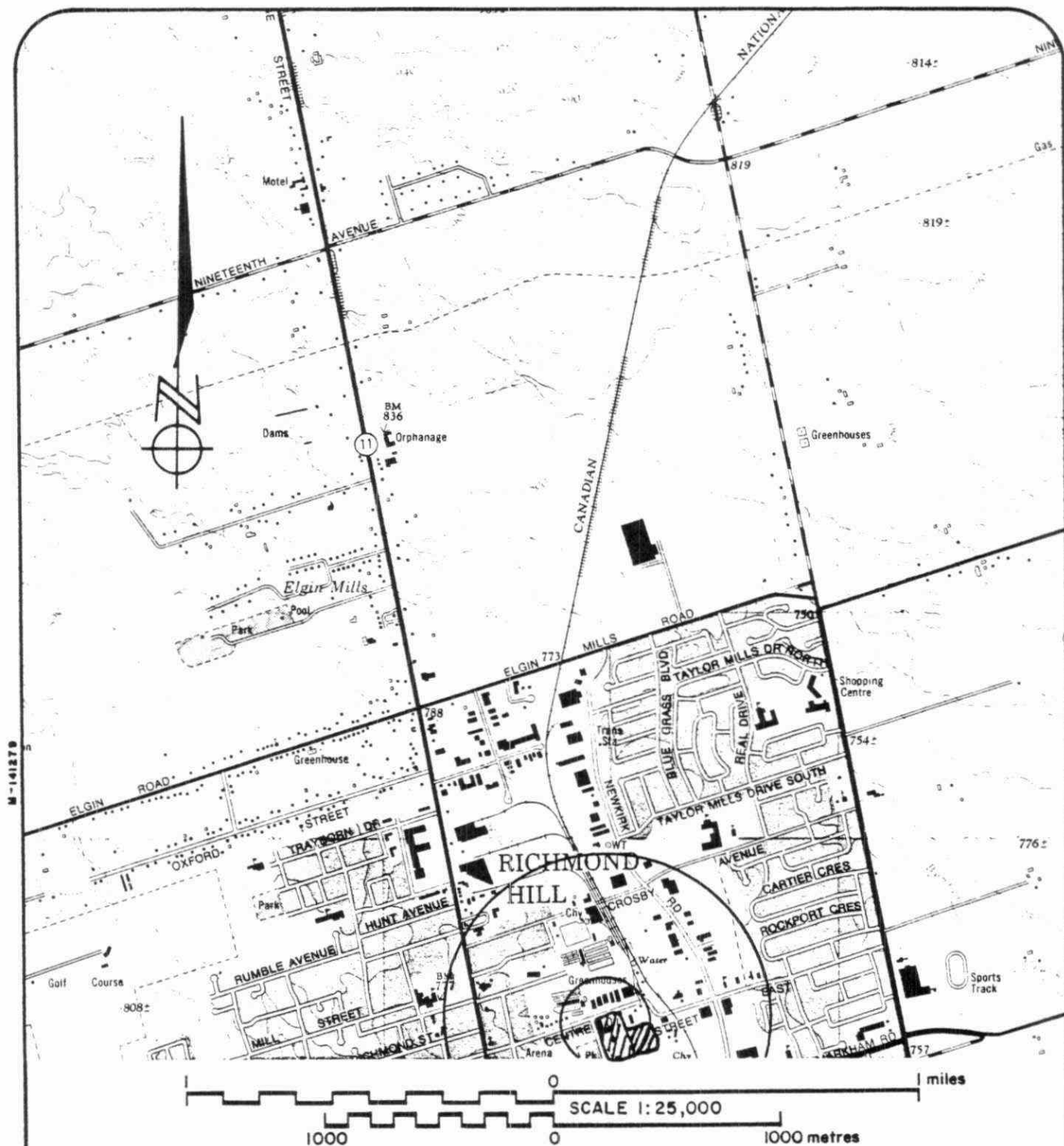
## Potential Impacts

- the waste at this site appears to be older than 30 years; since buildings have been built on the site, we presume there is no significant methane hazard; minor methane generation could migrate into the on-site buildings from isolated decomposing waste

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses.
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

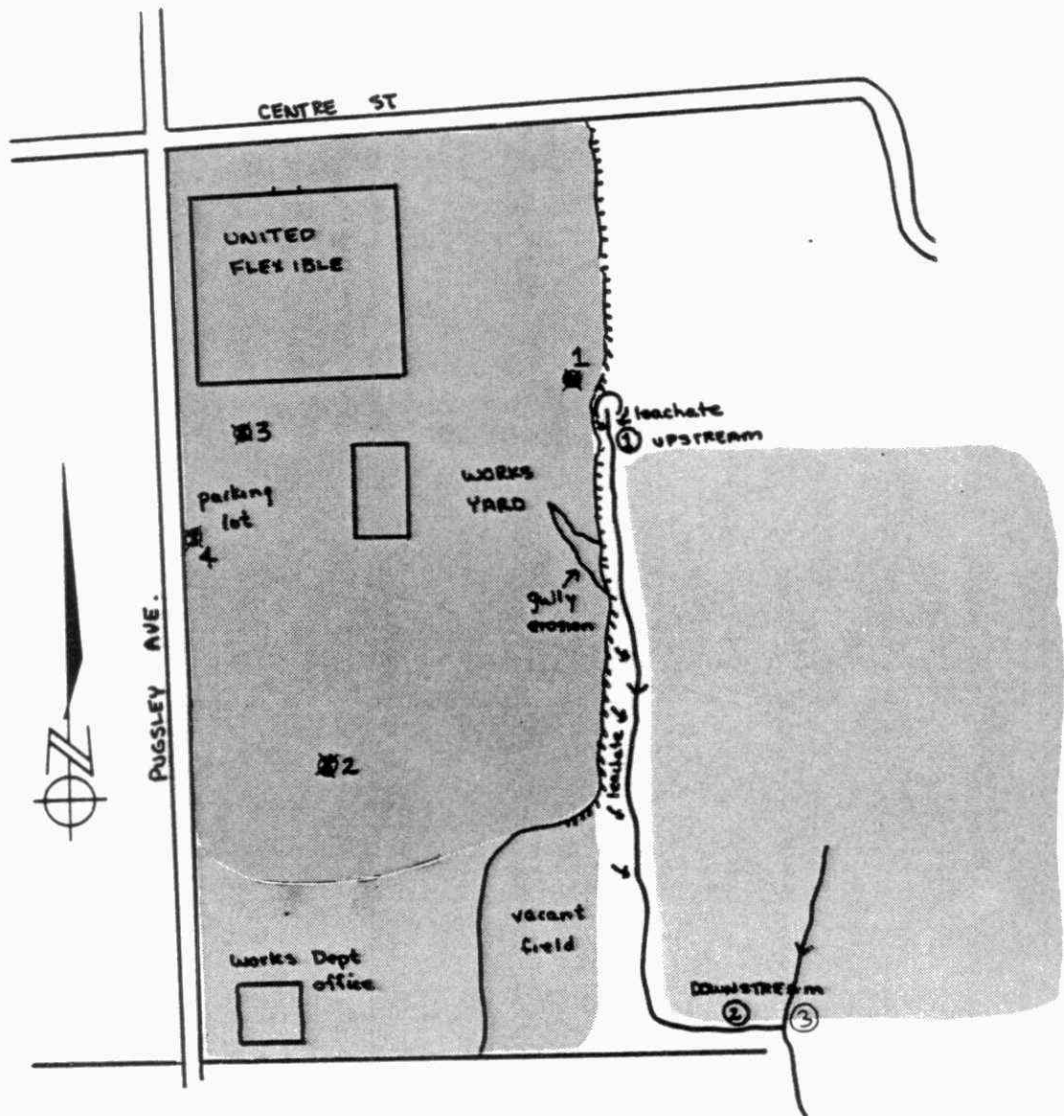
M-141279



SITE NO. 7006  
RICHMOND HILL

Morrison Beatty Limited  
Gore & Storrie Limited





LEGEND

- |                        |                                                                                      |
|------------------------|--------------------------------------------------------------------------------------|
| WASTE DISPOSAL SITE    |  |
| WATER SAMPLE LOCATIONS | ①                                                                                    |
| GAS SAMPLE LOCATIONS   | ⊗                                                                                    |
| - in field             | 2                                                                                    |
| - in buildings         | x 2                                                                                  |

NOT TO SCALE

SITE NO. 7006  
RICHMOND HILL

Morrison Beatty Limited  
Gore & Storrie Limited



Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7006



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 6, 1980 SITE IDENTIFICATION CODE 7006

SITE Centre St. and Pugsley Ave., Richmond Hill  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

| 1    | 2    | 3    | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|------|------|---|---|---|---|---|---|----|
| 305  | 701  | 5214 |   |   |   |   |   |   |    |
| 7    | 7    | 7    |   |   |   |   |   |   |    |
| .17  | .22  | .56  |   |   |   |   |   |   |    |
| 137  | 240  | 428  |   |   |   |   |   |   |    |
| 1120 | 1120 | 500  |   |   |   |   |   |   |    |

1) Chlorides

2) pH

3) Iron

4) Alkalinity

5) Conductivity  $\mu$ hos

###### B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

1) Chlorides

2) Dissolved solids

3) Iron

4) Alkalinity

5) Conductivity

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

Test

Holes

Results

Test

Holes

Results

Name/Address

Results

Name/Address

Results

#1

0%

#6

\_\_\_\_\_

1. United Flexible, Centre St.

0%

6. \_\_\_\_\_

#2

0%

#7

\_\_\_\_\_

2. Works Yard, Pugsley Ave.

0%

7. \_\_\_\_\_

#3

0%

#8

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

8. \_\_\_\_\_

#4

0%

#9

\_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_

9. \_\_\_\_\_

#5

#10

\_\_\_\_\_

5. \_\_\_\_\_

\_\_\_\_\_

10. \_\_\_\_\_

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7009

Location..... OAK RIDGES  
REGION OF YORK

Morrison Beatty Limited

Gore & Storrie Limited





Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7009

LOCATION King Side

Road & Yonge Street

Oak Ridges

## Background

### Waste Disposal Practices

- Operated as a waste disposal site for the Town of Richmond Hill; it is quite small being a maximum of 50 by 100 metres in size.
- There was no sign of domestic garbage on the site; however, it was obvious from the exposed asphalt pieces that fill of some nature had been placed in the area.
- A resident of the area for 32 years had never seen any domestic solid wastes placed on this site, but suggested that garbage of all types was being dumped across the road directly north of the site.
- Information source was a nearby local resident.

### Land Uses

**Original** - Low lying swampy land.

### Present Development

**On - site** - The Oak Ridges Public Library and Fire Hall.

**Abutting**

- North - King's Side Road and existing garbage dump.
- East - Commercial buildings, Yonge Street.
- South - Municipal waste treatment plant, residential dwellings.
- West - Residential buildings.

### Present Site Owner

- Town of Richmond Hill.

## Hydrogeologic Setting

### Geology

- this site is located on the Oak Ridges Moraine; the overburden in the area is sandy

### Regional Drainage

- the site is in the headwater areas of the Humber River; the river rises about 0.5 km south of the site and flows in a northwest direction just west of the library property
- the site was originally a low lying swamp; the water table in the vicinity is within one metre of surface

## Disposal Site Detail

### Fill Characteristics

- the fill site appears to be 1-2 m in depth; it has been grassed and is presently maintained as a yard for the library/firehall building

### Topography and Drainage

- the surface of the fill has been graded flat; deep ditches are maintained around the site to provide drainage



## Identified Impact

### Settlement & Erosion

- settlement depressions were observed over most of the site
- there was no significant erosion at the site

### Vegetation Stress

- areas of sparse vegetation were found on the north side of the library building; however, this may be due to poor quality cover material

### Leachate

- the ditch parallel to the firehall driveway contains standing leachate along the full length
- there was an oil film on top of this standing water
- this water does not gain access to any flowing watercourse

### Methane Gas

- no methane gas was detected at any of the selected locations in the landfill
- gas was not found in any of the monitored buildings

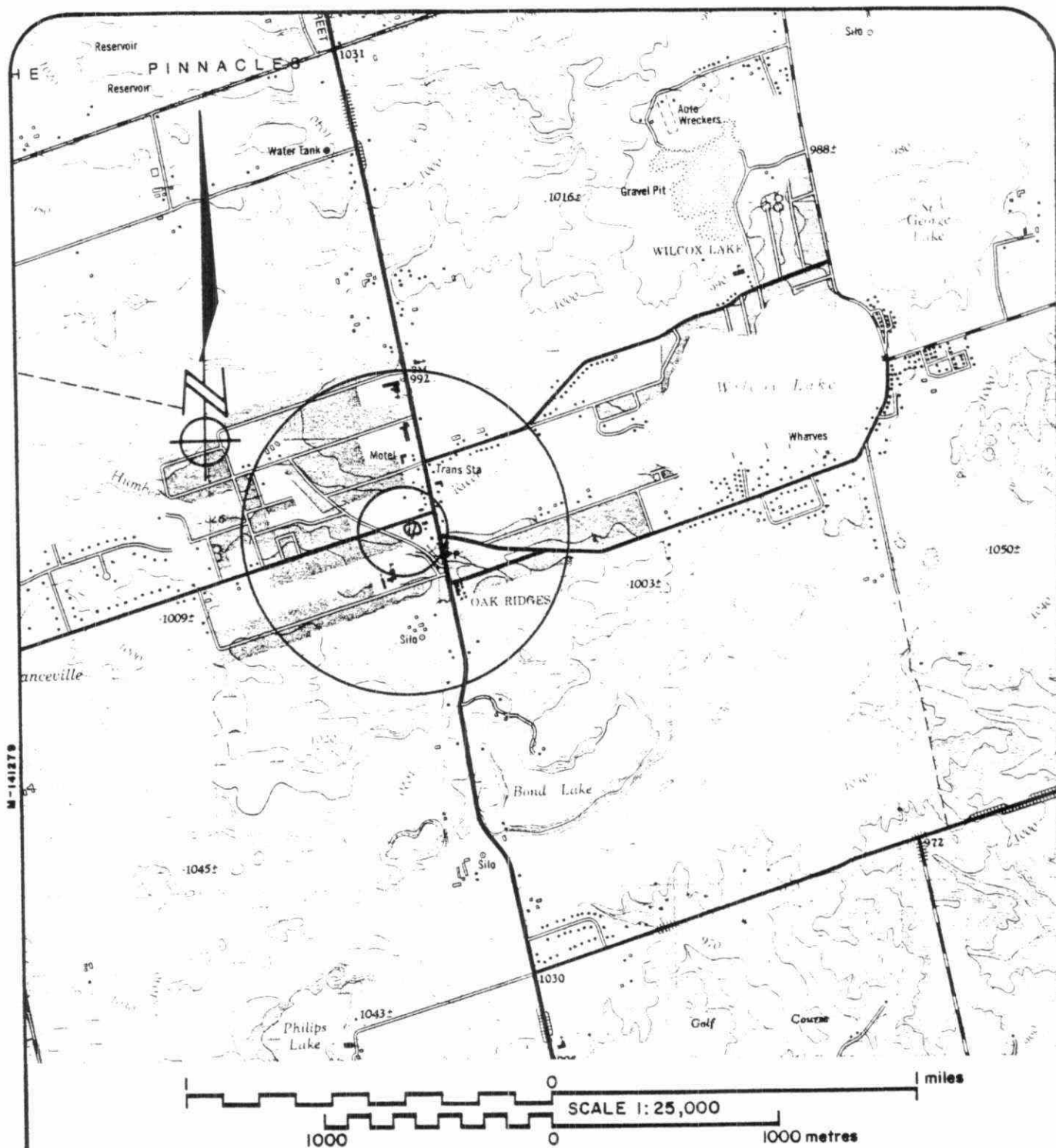
## Potential Impacts

- gas migration into the library/firehall from waste disposal at the site
- the polluted standing water in the ditch may constitute a health hazard to children playing in the vicinity of the library

## Recommendations

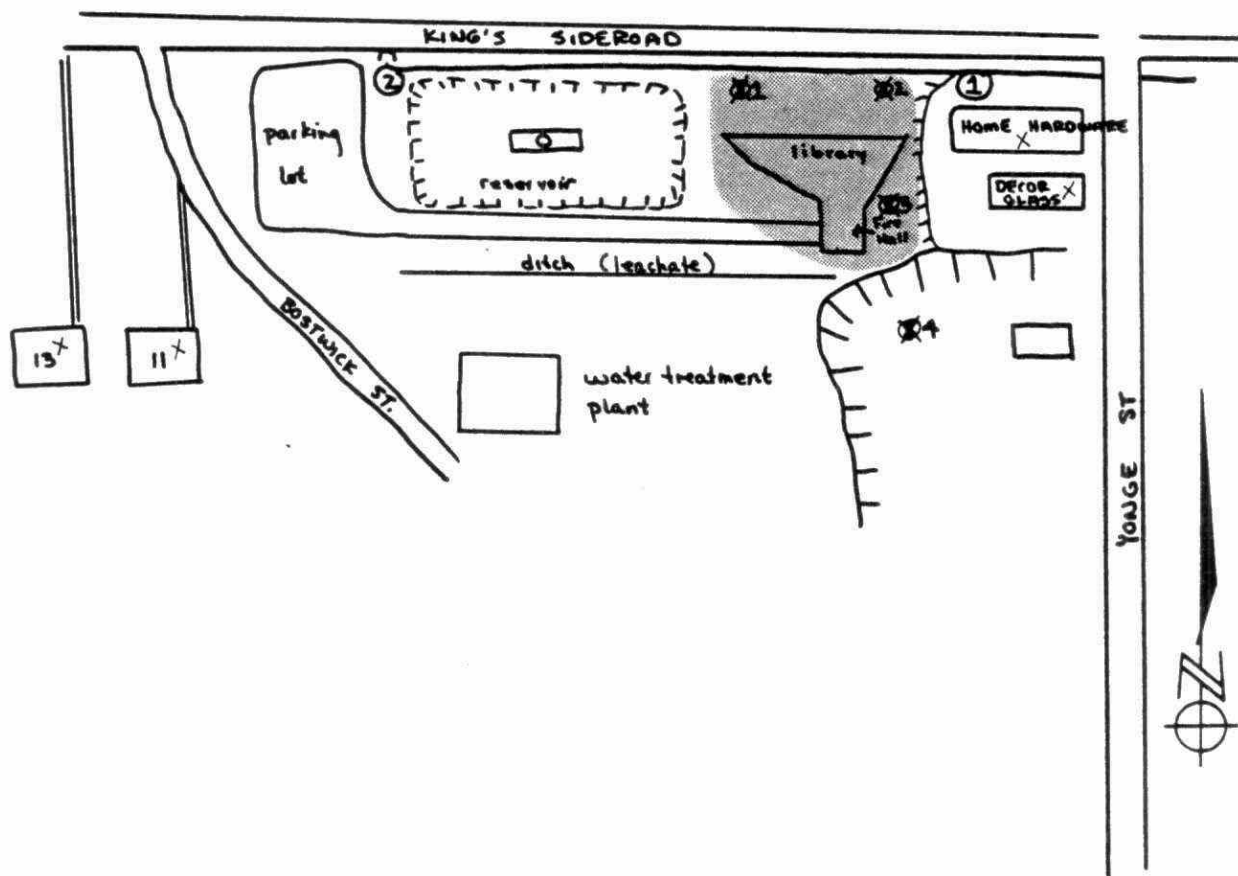
1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

| <u>LOCATION</u>                      | <u>ESTIMATED<br/>NUMBER</u> |
|--------------------------------------|-----------------------------|
| - near library/fire hall foundations | 6                           |



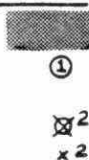
SITE NO. 7009  
OAK RIDGES

Morrison Beatty Limited  
Gore & Storrie Limited



LEGEND

WASTE DISPOSAL SITE  
 WATER SAMPLE LOCATIONS  
 GAS SAMPLE LOCATIONS  
 - in field  
 - in buildings



NOT TO SCALE

SITE NO. 7009  
 OAK RIDGES

Morrison Beatty Limited  
 Gore & Storrie Limited



Ontario

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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7009



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:3330





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Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 6, 1980 SITE IDENTIFICATION CODE 7009  
SITE King's Sideroad & Yonge St., Oak Ridges  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

#### I Leachate

##### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

|                                  | Results |     |   |   |   |   |   |   |   |    |
|----------------------------------|---------|-----|---|---|---|---|---|---|---|----|
|                                  | 1       | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides                     | 152.5   | 122 |   |   |   |   |   |   |   |    |
| 2) pH                            | 6       | 7   |   |   |   |   |   |   |   |    |
| 3) Iron                          | .12     | .14 |   |   |   |   |   |   |   |    |
| 4) Alkalinity                    | 240     | 240 |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu\text{mhos}$ | 500     | 430 |   |   |   |   |   |   |   |    |

##### B. WELLS WITHIN 100 METRES

Parameter

|                     | Results |   |   |   |   |   |   |   |   |    |
|---------------------|---------|---|---|---|---|---|---|---|---|----|
|                     | 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides        |         |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |         |   |   |   |   |   |   |   |   |    |
| 3) Iron             |         |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |         |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |         |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☐ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

#### II Gas

##### C. ON-SITE

| Test  | Results | Test  | Results |
|-------|---------|-------|---------|
| Holes |         | Holes |         |
| #1    | 0%      | #6    |         |
| #2    | 0%      | #7    |         |
| #3    | 0%      | #8    |         |
| #4    | 0%      | #9    |         |
| #5    |         | #10   |         |

##### D. BUILDINGS

| Name/Address                       | Results | Name/Address                            | Results |
|------------------------------------|---------|-----------------------------------------|---------|
| 1.13 King's Sideroad               | 0%      | 6. Oak Ridges Fire Dept. (no one there) |         |
| 2.11 King's Sideroad (no one home) |         | 7.                                      |         |
| 3. Home Hardware, Yonge St.        | 0%      | 8.                                      |         |
| 4. Decor Glass Co., Yonge St.      | 0%      | 9.                                      |         |
| 5. Oak Ridges Library              | closed  | 10.                                     |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7015

Location..... NEWMARKET  
REGION OF YORK

Morrison Beatty Limited

Gore & Storrie Limited



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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7015

LOCATION

Queen Street

Newmarket

## Background

### Waste Disposal Practices

- Operated by the Town of Newmarket as a Municipal wastes disposal site in earlier years (estimated around the 1950's).
- The site is roughly one-tenth of a hectare in size and appears to be ash and gravel for the first 1.5 metres.
- The works building consisting of a shop and 2 garages is located on the southwest corner of the site.
- Information source was Mr. Dave Hollman, Parks and Recreation Department, Town of Newmarket.

### Land Uses

- Original** - Low lying flood plain for the Holland River.

### Present Development

- On - site**
- Vacant and used as a parking lot for the most part.
  - The southwest corner of the Town Works building.

- Abutting**
- North - Railway tracks and the Holland River.
  - East - Holland River.
  - West - Railway track spur line.
  - South - Queen Street.

### Present Site Owner

- Town of Newmarket.

## Hydrogeologic Setting

### Geology

- regionally, the area is blanketed by a clayey silt till (Kettleby)
- locally, in the vicinity of the site, modern alluvium deposits from the Holland River are encountered

### Regional Drainage

- the site abuts the Holland River and occupies the original floodplain
- the upland developed areas west of the site are serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the fill area appears to be 1.5 m in depth
- the entire site is utilized by the Newmarket Public Works Department, with the building constructed on the southwest corner of the site; maintenance yards occupy the remainder of the fill; the yard area is gravelled

### Topography and Drainage

- the surface of the site has been graded smooth and flat
- the east and north limits of fill are bounded by the Holland River
- drainage from the site flows directly to the river

## Identified Impact

### Settlement & Erosion

- no significant settlement or erosion problems

### Vegetation Stress

- the landfill site is presently a gravel parking lot; there is no vegetative cover on the site

### Leachate

- no leachate seepage was observed
- the water quality of the downstream sample shows no measureable impacts.

### Methane Gas

- no evidence of methane gas from the barholes driven into the site
- the Newmarket Works Department building on the site was checked for methane gas; none was detected

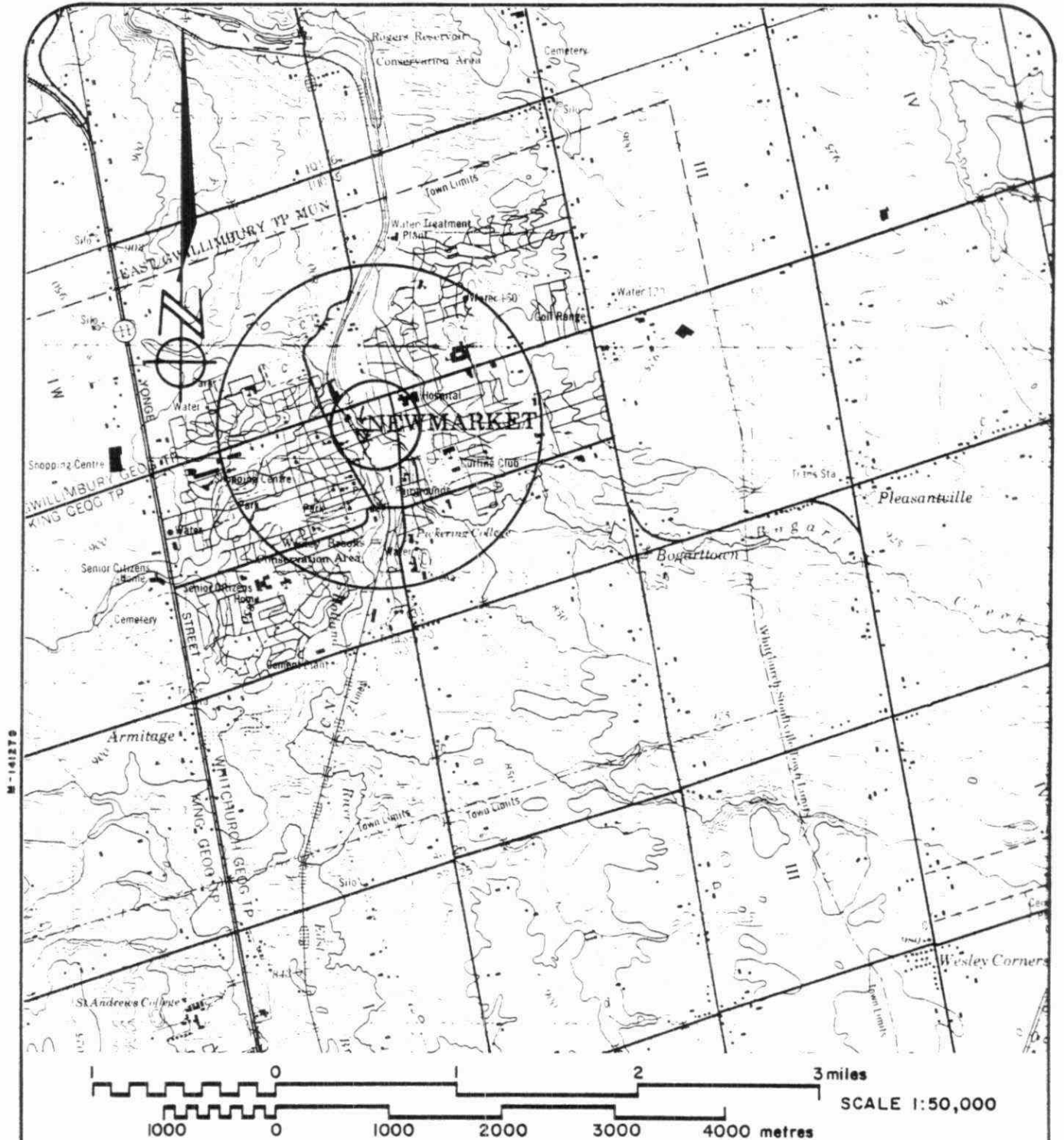
## Potential Impacts

- the presence of the on-site building and age of fill suggests potential methane or leachate impacts will be insignificant.

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

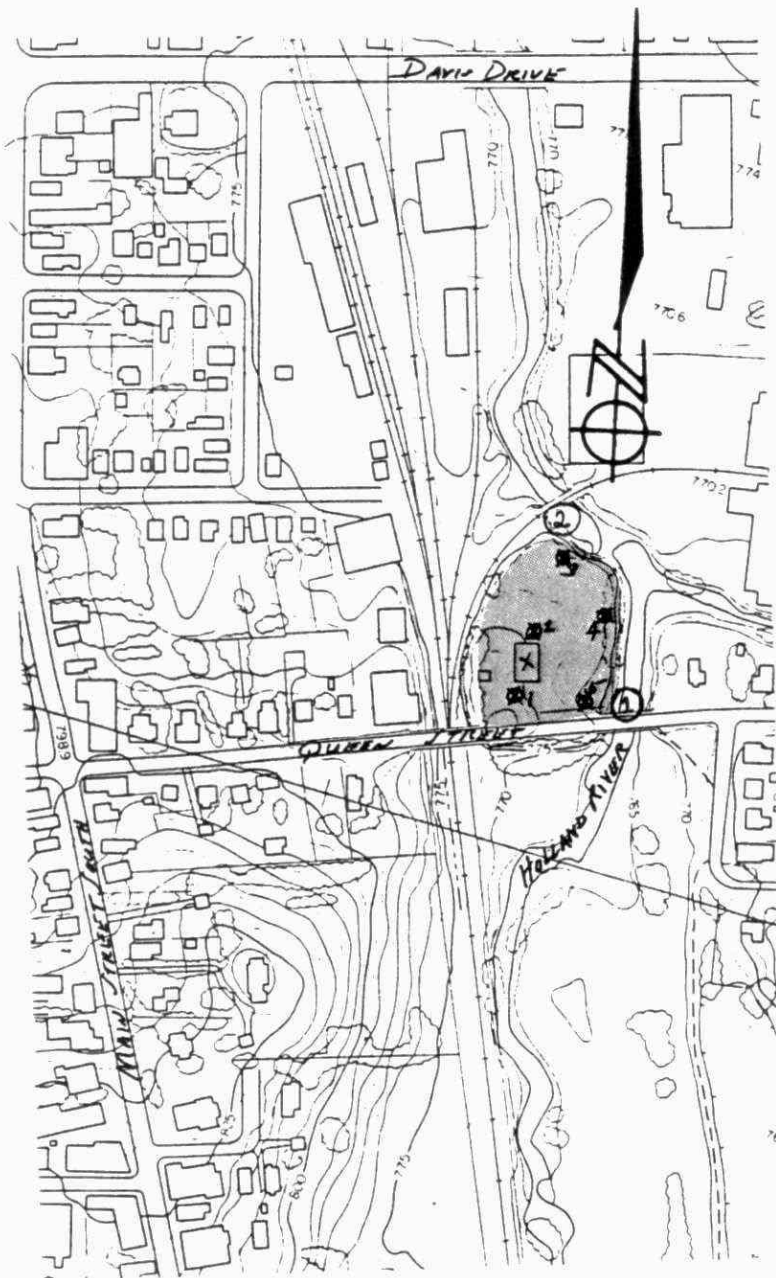
M-141279



SITE NO. 7015  
 QUEEN ST., NEWMARKET

Morrison Beatty Limited  
 Gore & Storrie Limited





LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS ①
- GAS SAMPLE LOCATIONS
  - in field X 2
  - in buildings x 2

SCALE 1:3670 \*

SITE NO. 7015  
QUEEN ST., NEWMARKET

Morrison Beatty Limited  
Gore & Storrie Limited



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# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7015



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





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of the  
Environment

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION

DATE Oct. 9, 1980

SITE IDENTIFICATION CODE 7015

SITE Queen St., Newmarket

(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides mg/l
- 2) pH
- 3) Iron mg/l
- 4) Alkalinity mg/l
- 5) Conductivity  $\mu\text{mhos}$

| 1   | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-----|-----|---|---|---|---|---|---|---|----|
| 105 | 100 |   |   |   |   |   |   |   |    |
| 9.0 | 9.0 |   |   |   |   |   |   |   |    |
| 0.5 | 0.5 |   |   |   |   |   |   |   |    |
| 204 | 210 |   |   |   |   |   |   |   |    |
| 415 | 420 |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

###### Test

###### Holes Results

###### Test

###### Holes Results

###### Name/Address

###### Results

###### Name/Address

###### Results

- |    |    |     |  |
|----|----|-----|--|
| #1 | 0% | #6  |  |
| #2 | 0% | #7  |  |
| #3 | 0% | #8  |  |
| #4 | 0% | #9  |  |
| #5 | 0% | #10 |  |

1. Newmarket Parks & Recreation 0%
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

##### III General Comments (vegetation, leachate springs, depth, etc.)

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie

REGION OF DURHAM

|      |            |
|------|------------|
| 7077 | AJAX       |
| 7108 | OSHAWA     |
| 7112 | PORT PERRY |





Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7077

Location..... AJAX  
REGION OF DURHAM

Morrison Beatty Limited

Gore & Storrie Limited





Ontario

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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7077  
LOCATION Lake  
Driveway & McClarnan  
Road, Ajax

## Background

### Waste Disposal Practices

- Operated by the Town of Ajax as a domestic waste disposal site in the 1940's.
- A coffee processing plant later used the site for dumping coffee grinds on the same site until the pile was 2 metres above grade.
- In 1969/70, the area was developed into a low-density subdivision and all waste coffee grounds and refuse were totally removed.
- Nothing remains on the site and testing appears to verify this.
- The original site of  $\frac{1}{2}$  hectare is now clean.
- Information source was Mr. G.A. Robinson of Walvin, Robinson Consulting Engineers Limited, Ajax.

### Land Uses

#### Original

- A Canadian Forces munitions depot during the war.
- The area was a low lying area near Lake Ontario.

### Present Development

#### On - site

- Low density residential subdivision exists on the site currently at Lake Driveway and Lewin Crescent and McClarnan Road intersection.

#### Abutting

- North - Single family houses on Lewin Cres. and McClarnan Rd.
- West - Single family houses on Lewin Cres.
- East - Single family houses on Crawford Drive.
- South - Open lakeside property and Lake Ontario.

### Present Site Owner

- Private individual homes.
- City of Ajax.

## Hydrogeologic Setting

### Geology

- the region is underlain by a clayey silt till

### Regional Drainage

- the site is within the shore drainage basin of Lake Ontario; there are no streams in the vicinity of the site

## Disposal Site Detail

### Fill Characteristics

- the site was a former disposal area for domestic waste and coffee grinds from a coffee processing plant
- prior to establishing a residential development over the site, all waste materials were removed

### Topography and Drainage

- no fill exists at the site

M-141279

## Identified Impact

### Settlement & Erosion

- there are no signs of settlement problems or erosion

### Vegetation Stress

- all lawns, shrubs and trees appear healthy
- there are no signs of vegetation stress on the areas where the coffee grinds were spread

### Leachate

- removal of the waste material eliminated any leachate impact

### Methane Gas

- homes in a 100 m radius of the former fill location were checked for methane gas; none was detected

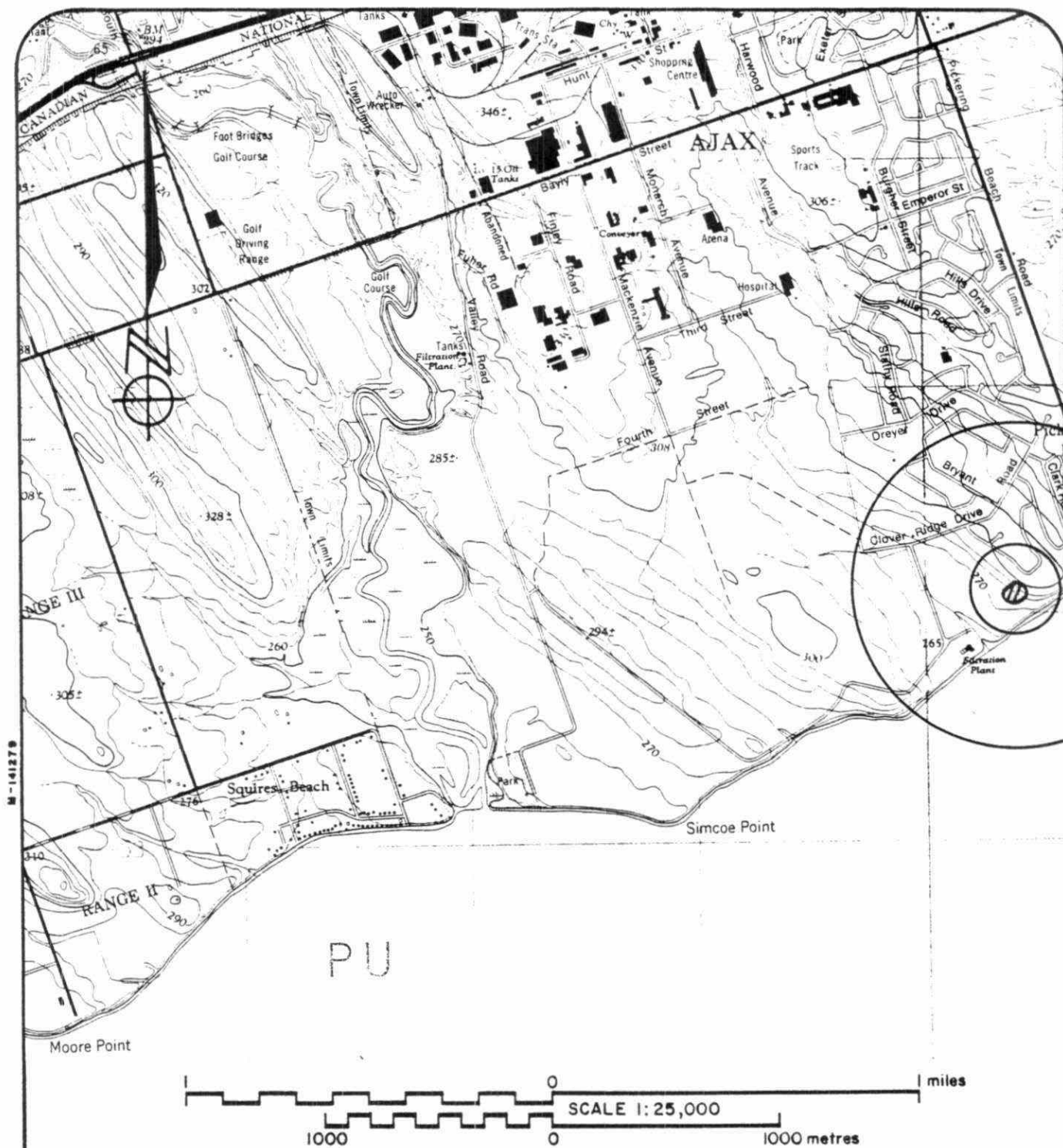
## Potential Impacts

- the waste material was totally removed from the former disposal site; this has eliminated any environmental impact at the site

## Recommendations

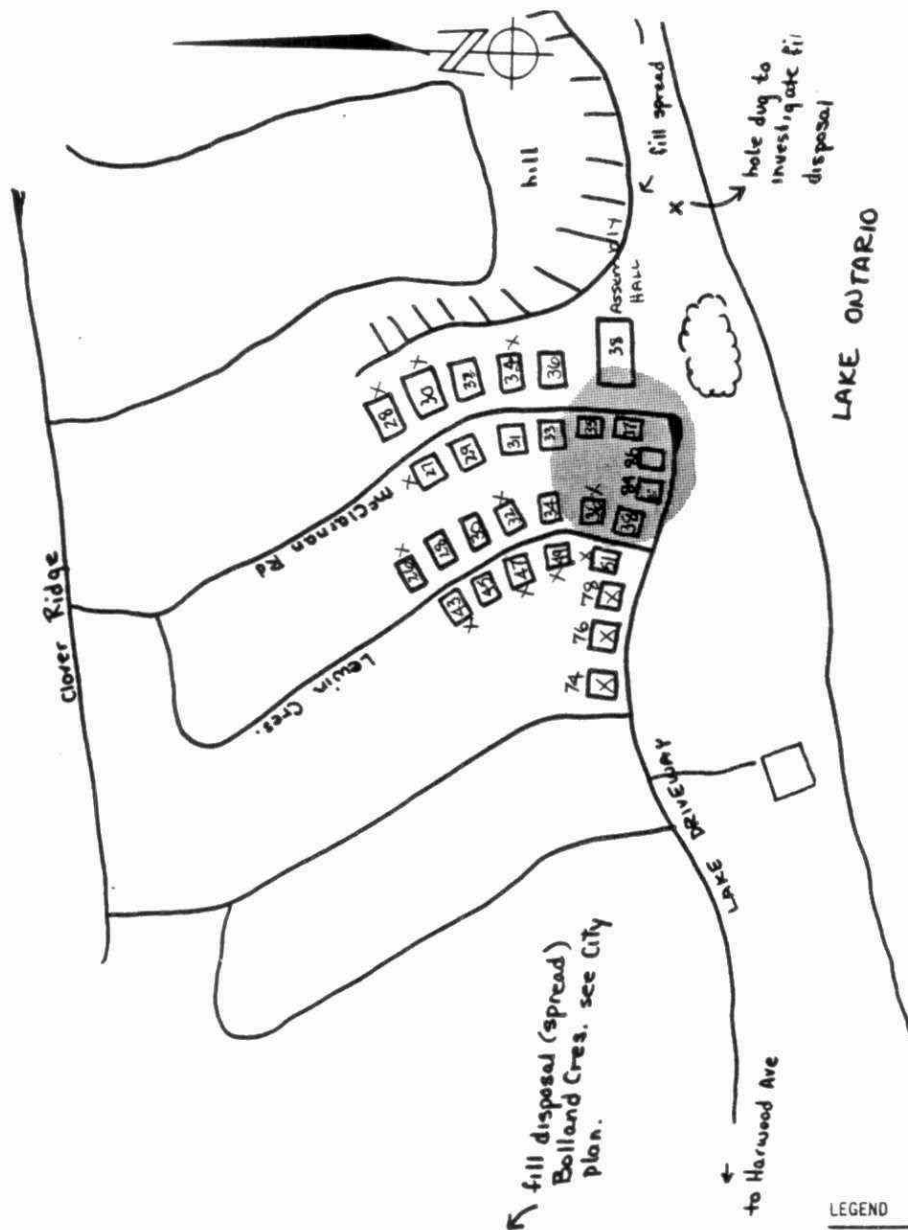
1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

M-141279



SITE NO. 7077  
AJAX

Morrison Beatty Limited  
Gore & Storrie Limited



LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS ①
- GAS SAMPLE LOCATIONS
  - in field X<sup>2</sup>
  - in buildings x<sup>2</sup>

NOT TO SCALE

SITE NO. 7077  
AJAX

Morrison Beatty Limited  
Gore & Storrie Limited





Ministry  
of the  
Environment  
Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7077



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 9, 1980 SITE IDENTIFICATION CODE 7077  
SITE Lake Driveway & Laurie, Lewin, McClarnan, Ajax  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

A. WATER BODIES WITHIN 100 METRES NONE

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES NONE

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes        No X Comments       

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes        No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

C. ON-SITE SEE FIELD NOTES

D. BUILDINGS

Test

Test

Holes

Results

Holes

Results

Name/Address

Results

Name/Address

Results

- |    |               |     |               |                                          |           |                                           |  |
|----|---------------|-----|---------------|------------------------------------------|-----------|-------------------------------------------|--|
| #1 | <u>      </u> | #6  | <u>      </u> | 1. <u>27 McClarnan Rd.</u>               | <u>0%</u> | 6. <u>36 McClarnan Rd. (no one home)</u>  |  |
| #2 | <u>      </u> | #7  | <u>      </u> | 2. <u>28 McClarnan Rd.</u>               | <u>0%</u> | 7. <u>Lake Drive Cristian Assembly</u>    |  |
| #3 | <u>      </u> | #8  | <u>      </u> | 3. <u>30 McClarnan Rd.</u>               | <u>0%</u> | 8. <u>Hall (no one there)</u>             |  |
| #4 | <u>      </u> | #9  | <u>      </u> | 4. <u>32 McClarnan Rd. (no one home)</u> |           | 9. <u>37 McClarnan Rd. (no one home)</u>  |  |
| #5 | <u>      </u> | #10 | <u>      </u> | 5. <u>34 McClarnan Rd. (no one home)</u> |           | 10. <u>35 McClarnan Rd. (no one home)</u> |  |

III General Comments (vegetation, leachate springs, depth, etc.)       

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7077 - Page 2

SITE Lake Driveway con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

#1 \_\_\_\_\_  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

Test

Holes Results

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

Name/Address

1. 33 McClarnan Rd. (no one home)  
2. 31 McClarnan Rd. (no one home)  
3. 29 McClarnan Rd. (no one home)  
4. 38 Lewin Cres. (no one home)  
5. 36 Lewin Cres. 0%

Results

Name/Address

6. 34 Lewin Cres. (no one home)  
7. 32 Lewin Cres. 0%  
8. 30 Lewin Cres. (no one home)  
9. 28 Lewin Cres. (no one home)  
10. 26 Lewin Cres. 0%

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7077 - Page 3

SITE Lake Driveway, Ajax con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

###### B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

Test

Holes

Results

Test

Holes

Results

Name/Address

Results

Name/Address

Results

#1  
#2  
#3  
#4  
#5

#6  
#7  
#8  
#9  
#10

1. 43 Lewin Cres.  
2. 45 Lewin Cres. (no one home)  
3. 47 Lewin Cres.  
4. 49 Lewin Cres.  
5. 51 Lewin Cres.

0%  
  
0%  
0%  
0%  
0%

6. 78 Lake Driveway E.  
7. 76 Lake Driveway E.  
8. 74 Lake Driveway E.  
9. 84 Lake Driveway E. (no one home)  
10. 86 Lake Driveway E. (no one home)

0%  
0%  
0%  
  
0%

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7108

Location..... OSHAWA  
REGION OF DURHAM

Morrison Beatty Limited

Gore & Storrie Limited



Ministry  
of the  
Environment  
Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7108

LOCATION

Eastview Park

Oshawa

## Background

### Waste Disposal Practices

- Operation by the City of Oshawa as a municipal waste disposal site around the mid 1940's and early 1950's.
- It was covered about the mid 1950's with an estimated 1 metre thickness of fill.
- It covers an area of about 2.5 hectares.
- There is an on-going methane gas monitoring program conducted by the City of Oshawa. Their probe locations are shown on the sketch.
- Information source was Mr. Peter P. Watson, Operations Engineer, City of Oshawa.

### Land Uses

#### Original

- Portion of a low lying ravine or depression.
- Vacant undeveloped land.

### Present Development

#### On - site

- Parkland with three baseball diamonds.
- Eastview Boy's and Girl's Club.

#### Abutting

- North - Residential homes along Eulalie Avenue.
- South - Residential homes along Vimy Avenue.
- East - Residential homes along Cadillac Street
- West - Residential homes along Vimy Avenue.

### Present Site Owner

- City of Oshawa.



## Hydrogeologic Setting

### Geology

- the site is underlain by lacustrine clays and silts
- the water table is about one metre below ground

### Regional Drainage

- the site is located within the watershed of Harmony Creek
- the entire area surrounding the site is serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- a previous study of the site by Gartner Lee Associates Ltd established the fill is relatively thin (<2 m)

### Topography and Drainage

- the surface has been smoothly graded with a slight southward grade
- drainage at the site is good

M-141279

## Identified Impact

### Settlement & Erosion

- there are minor settlement depressions over the extent of the site
- erosion is not a problem

### Vegetation Stress

- grass in the park is healthy and green
- there has been very little vegetation stress reported in past years

### Leachate

- leachate seepage is not a problem at this site

### Methane Gas

- no methane gas was detected in any barhole location in the landfill site or in the monitored buildings
- a previous investigation of landfill gas was carried out by Gartner Lee Associates Ltd (1977); five gas probes were installed through the refuse in the vicinity of the Boys Club building, which is on-site; the highest methane concentration was reported to be 0.5%

## Potential Impacts

- impacts due to settlement, leachate or methane are not expected due to the age of the site and type of waste

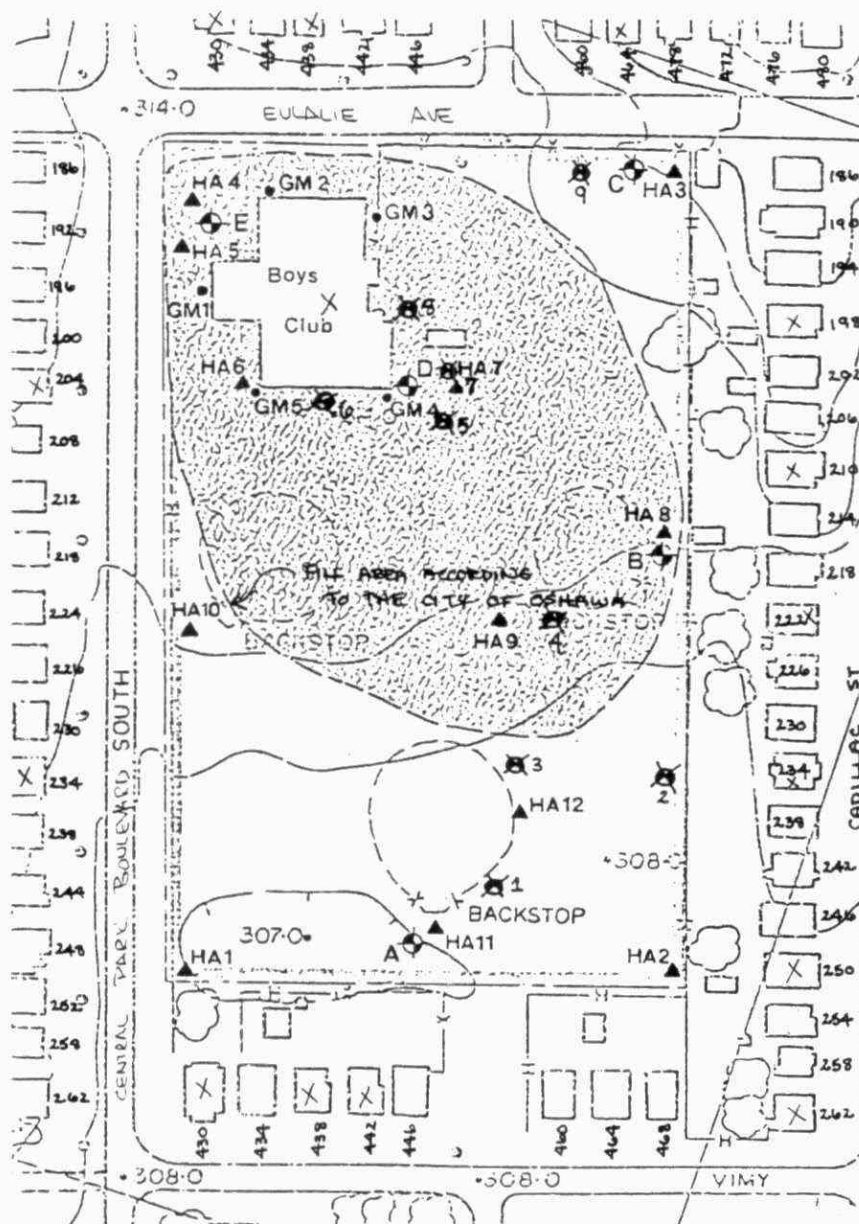
## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

M-141278



M-221080



2 - Barholes, Oct 9, 1980

#### LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS ①
- GAS SAMPLE LOCATIONS
  - in field ⊗ 2
  - in buildings x 2

NOT TO SCALE

**SITE NO. 7108**  
**OSHAWA**

**Morrison Beatty Limited**  
**Gore & Storrie Limited**



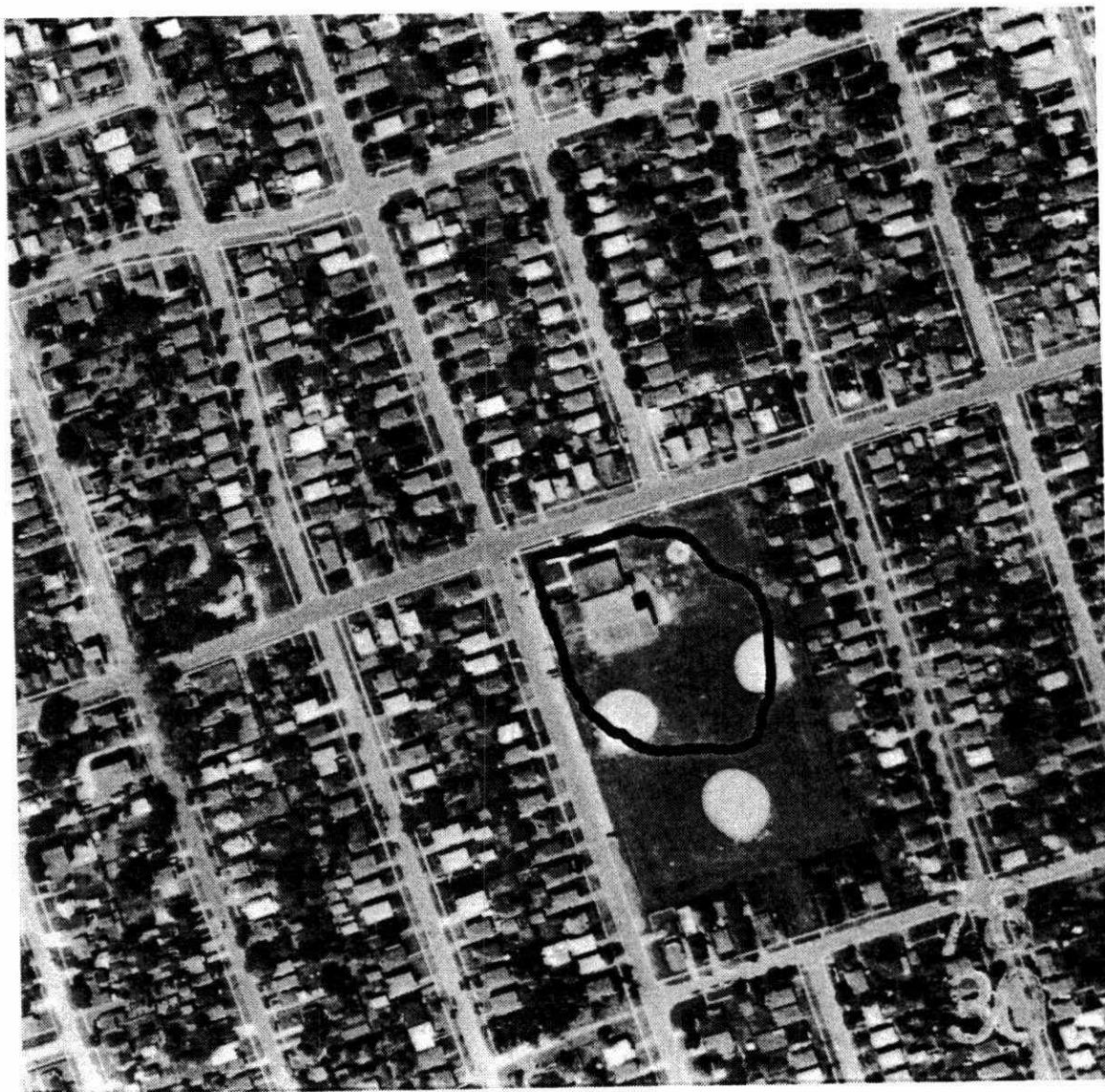
Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7108



Morrison Beatty Limited  
Gore & Storrie Limited

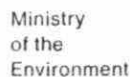
DISPOSAL  
AREA



SCALE 1:3330







(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

## SITE INSPECTION

|            |                |      |              |                          |      |
|------------|----------------|------|--------------|--------------------------|------|
| MOE REGION | CENTRAL REGION | DATE | Oct. 9, 1980 | SITE IDENTIFICATION CODE | 7108 |
|------------|----------------|------|--------------|--------------------------|------|

| SITE | Eastview Park, Oshawa<br>(Lot, concession #, or UTM coordinates, name, address) |
|------|---------------------------------------------------------------------------------|
|      |                                                                                 |

## ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES NONE

Parameter

## Results

[illegible]

| Any significant odour problems | Yes | No | x | Comments |
|--------------------------------|-----|----|---|----------|
|                                |     |    |   |          |

B. WELLS WITHIN 100 METRES NONE

Parameter

## Results

[illegible]

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

## II Gas

### C. ON-SITE

#### D. BUILDINGS

| Test Holes | Results | Test Holes | Results |
|------------|---------|------------|---------|
| #1         | 0%      | #6         | 0%      |
| #2         | 0%      | #7         | 0%      |
| #3         | 0%      | #8         | 0%      |
| #4         | 0%      | #9         | 0%      |
| #5         | 0%      | #10        | 0%      |

| Name/Address                                   | Results | Name/Address                                    | Results |
|------------------------------------------------|---------|-------------------------------------------------|---------|
| 1. <u>186 Central Park Blvd. (no one home)</u> |         | 6. <u>208 Central Park Blvd. (no one home)</u>  |         |
| 2. <u>192 Central Park Blvd. (no one home)</u> |         | 7. <u>212 Central Park Blvd. (no one home)</u>  |         |
| 3. <u>196 Central Park Blvd. (no one home)</u> |         | 8. <u>218 Central Park Blvd. (no one home)</u>  |         |
| 4. <u>200 Central Park Blvd. (no one home)</u> |         | 9. <u>224 Central Park Blvd. (no one home)</u>  |         |
| 5. <u>204 Central Park Blvd. 0%</u>            |         | 10. <u>226 Central Park Blvd. (no one home)</u> |         |

(didn't understand English)

III General Comments (vegetation, leachate springs, depth, etc.) (didn't understand English)

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7108 - Page 2

SITE Eastview Park, Oshawa con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Test

Holes

Results

Holes

Results

Name/Address

Results

Name/Address

Results

#1  
#2  
#3  
#4  
#5

#6  
#7  
#8  
#9  
#10

1.230 Central Park Blvd. (no one home)  
2.234 Central Park Blvd. 0%  
3.238 Central Park Blvd. (no one home)  
4.244 Central Park Blvd. (did not under-  
5.248 Central Park Blvd. (no one stand)

6.252 Central Park Blvd. (no one home)  
7.258 Central Park Blvd. (no one home)  
8.262 Central Park Blvd. (no one home)  
9.430 Vimsey St. 0%  
10.434 Vimsey St. (no admittance)

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7108 - Page 3

SITE Eastview Park, Oshawa, con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

#### I Leachate

##### A. WATER BODIES WITHIN 100 METRES

###### Parameter

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| Results |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|----|
| 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |

##### B. WELLS WITHIN 100 METRES

###### Parameter

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| Results |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|----|
| 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

#### II Gas

##### C. ON-SITE

| Test  | Results | Test  | Results |
|-------|---------|-------|---------|
| Holes |         | Holes |         |
| #1    |         | #6    |         |
| #2    |         | #7    |         |
| #3    |         | #8    |         |
| #4    |         | #9    |         |
| #5    |         | #10   |         |

##### D. BUILDINGS

| Name/Address                  | Results | Name/Address                       | Results |
|-------------------------------|---------|------------------------------------|---------|
| 1. 438 Vimy St.               | 0%      | 6. 468 Vimy St. (no one home)      |         |
| 2. 442 Vimy St.               | 0%      | 7. 262 Cadillac St.                | 0%      |
| 3. 446 Vimy St. (no one home) |         | 8. 254 Cadillac St. (no one home)  |         |
| 4. 460 Vimy St. (no one home) |         | 9. 250 Cadillac St.                | 0%      |
| 5. 464 Vimy St. (no one home) |         | 10. 246 Cadillac St. (no one home) |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7108 - Page 4

SITE Eastview Park, Oshawa con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

#1 \_\_\_\_\_  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

Test

Holes Results

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

Name/Address

1. 242 Cadillac St. (no one home)  
2. 238 Cadillac St. (no one home)  
3. 234 Cadillac St. 0%  
4. 230 Cadillac St. (no one home)  
5. 226 Cadillac St. (no one home)

Results

Name/Address

6. 222 Cadillac St. 0%  
7. 218 Cadillac St. 0%  
8. 214 Cadillac St. (no admittance)  
9. 210 Cadillac St. 0%  
10. 206 Cadillac St. (no one home)

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



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of the  
Environment

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

## SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7108 - Page 5

SITE Eastview Park, Oshawa con't  
(Lot, concession #, or UTM coordinates, name, address)

## ON-SITE TESTS

I Leachate

## A. WATER BODIES WITHIN 100 METRES

ParameterResults

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

## B. WELLS WITHIN 100 METRES

ParameterResults

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

## LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

## C. ON-SITE

Test

Holes Results

|    |       |     |       |
|----|-------|-----|-------|
| #1 | _____ | #6  | _____ |
| #2 | _____ | #7  | _____ |
| #3 | _____ | #8  | _____ |
| #4 | _____ | #9  | _____ |
| #5 | _____ | #10 | _____ |

## D. BUILDINGS

Name/AddressResults

|                     |               |
|---------------------|---------------|
| 1. 202 Cadillac St. | (no one home) |
| 2. 198 Cadillac St. | 0%            |
| 3. 194 Cadillac St. | (no one home) |
| 4. 190 Cadillac St. | (no one home) |
| 5. 186 Cadillac St. | (no one home) |

Name/AddressResults

|                     |               |
|---------------------|---------------|
| 6. 480 Eulalie St.  | (no one home) |
| 7. 476 Eulalie St.  | (no one home) |
| 8. 472 Eulalie St.  | (no one home) |
| 9. 464 Eulalie St.  | 0%            |
| 10. 460 Eulalie St. | (no one home) |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 7108 - Page 6

SITE Eastview Park, Oshawa con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Test

Holes Results

Holes Results

Name/Address

Results

Name/Address

Results

- |    |       |     |       |
|----|-------|-----|-------|
| #1 | _____ | #6  | _____ |
| #2 | _____ | #7  | _____ |
| #3 | _____ | #8  | _____ |
| #4 | _____ | #9  | _____ |
| #5 | _____ | #10 | _____ |

1. 478 Eulalie St. 0%
2. 446 Eulalie St. (no one home)
3. 442 Eulalie St. (no one home)
4. 438 Eulalie St. 0%
5. 434 Eulalie St. (no one home)

6. 430 Eulalie St. 0%
7. 483 Eulalie St. (Eastview
8. Boys & Girls Club 0%
9. \_\_\_\_\_
10. \_\_\_\_\_

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie





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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 7112

Location..... PORT PERRY  
REGION OF DURHAM

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 7112

LOCATION

Scugog & Water Sts.

Port Perry

## Background

### Waste Disposal Practices

- Operated by the Town of Port Perry between 1930 - 1935 as a small municipal disposal site.
- It covers approximately 0.1 hectare.
- The Town population during this period was between 700 - 900 with very little industry.
- Domestic waste was the main commodity.

### Land Uses

Original - Swampy land adjacent to Lake Scugog.

### Present Development

On - site - Playing field.

### Abutting

North - Parkland.  
South - Parkland.  
West - Light industrial and commercial.  
East - Reclaimed land.

### Present Site Owner

- Town of Port Perry.

Morrison Beatty Limited | Gore & Storrie Limited

## Hydrogeologic Setting

### Geology

- the site is underlain by a sand deposit

### Regional Drainage

- the site is within about 30 m of Lake Scugog
- the area west of the site is served by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the actual waste disposal occupies the western portion of a large land reclamation project
- the disposal area extends up to about 30 m east of Water Street
- the surface has been graded smooth, covered and vegetated

### Topography and Drainage

- the site slopes slightly toward the lake
- drainage is good

## Identified Impact

### Settlement & Erosion

- settlement and erosion are not problems at this site
- the playfield appears flat and even

### Vegetation Stress

- no obvious signs of stress were noted

### Leachate

- staining was observed in the grassed drainage ditch which runs west of the site; iron and conductivity readings were high in the water found in the ditch; the cause of the high readings is uncertain
- the drainage ditch eventually enters into Lake Scugog

### Methane Gas

- no methane was detected in the landfill site or in any of the monitored buildings

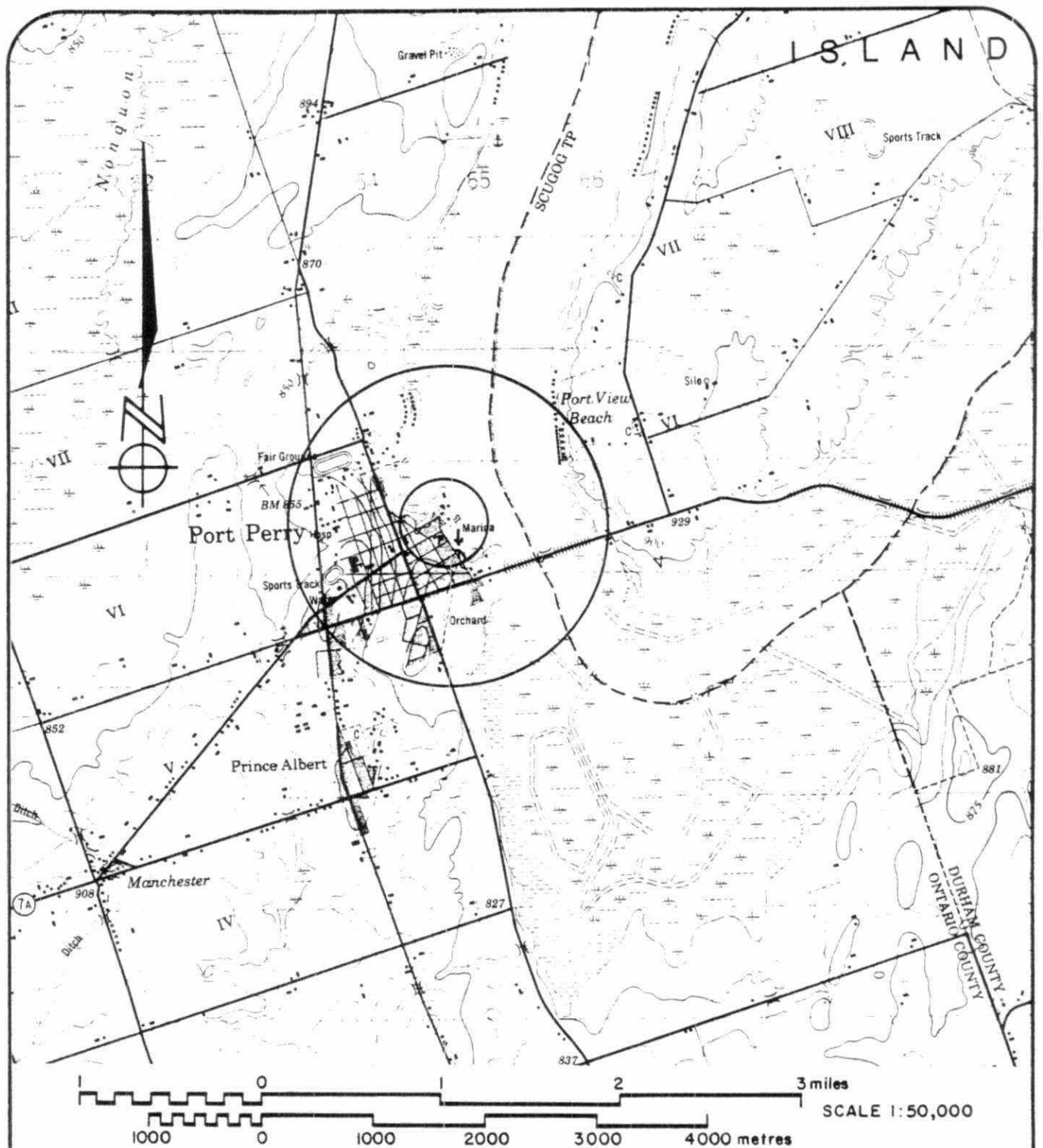
## Potential Impacts

- no hazards are anticipated from leachate, settlement or gas migration due to the age of the site

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

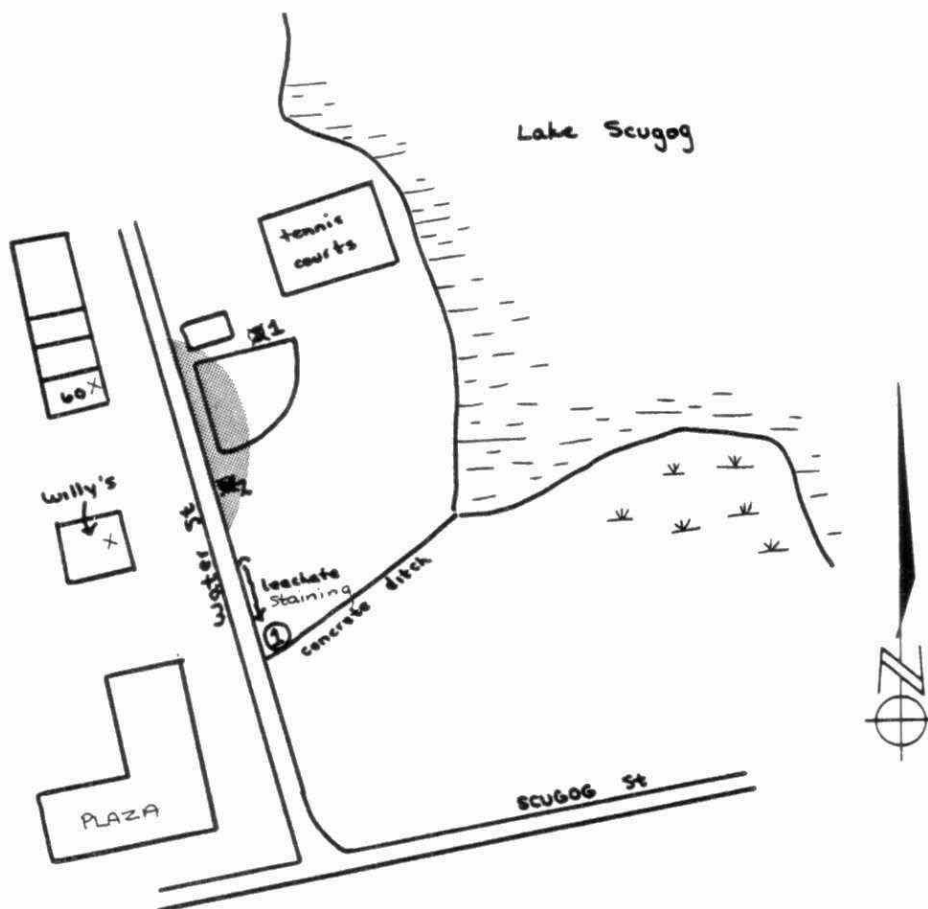
M-141279



SITE NO. 7112  
PORT PERRY

Morrison Beatty Limited  
Gore & Storrie Limited





LEGEND

WASTE DISPOSAL SITE



WATER SAMPLE LOCATIONS

①

GAS SAMPLE LOCATIONS

- in field

x<sup>2</sup>

- in buildings

x<sup>2</sup>

NOT TO SCALE

SITE NO. 7112  
PORT PERRY

Morrison Beatty Limited  
Gore & Storrie Limited



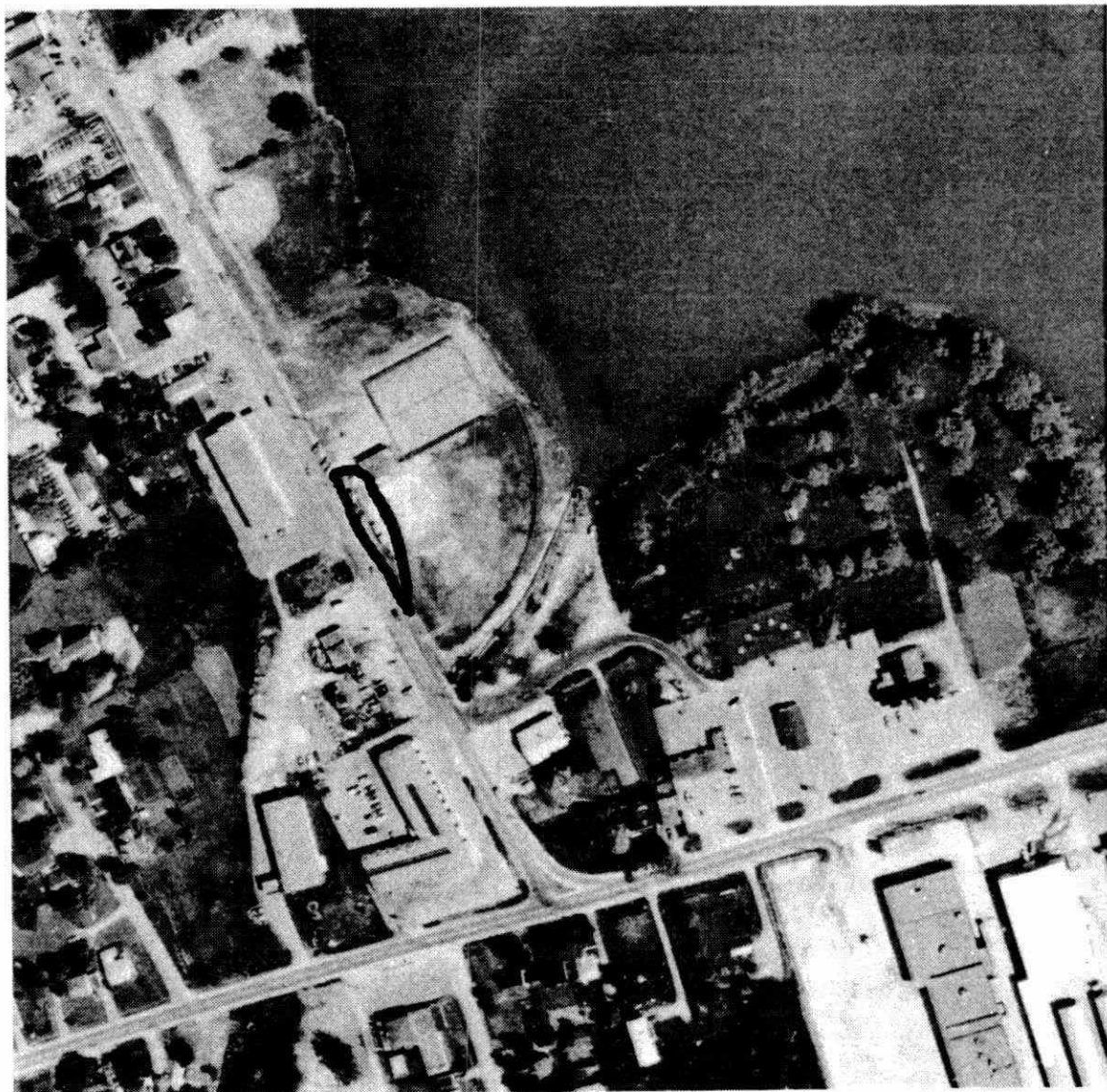
Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

7112



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:3225





Ontario

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Environment

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

## SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 8, 1980 SITE IDENTIFICATION CODE 7112  
SITE Water St. & Scugog St., Port Perry  
(Lot, concession #, or UTM coordinates, name, address)

## ON-SITE TESTS

## I Leachate

## A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

Results

|                                  | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------------|------|---|---|---|---|---|---|---|---|----|
| 1) Chlorides                     | 306  |   |   |   |   |   |   |   |   |    |
| 2) pH                            | 7    |   |   |   |   |   |   |   |   |    |
| 3) Iron                          | 1.0  |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity                    | 428  |   |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu\text{mhos}$ | 1000 |   |   |   |   |   |   |   |   |    |

## B. WELLS WITHIN 100 METRES

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

## LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

## II Gas

## C. ON-SITE

Test

Holes

Results

#1

0%

#2

0%

#3

#4

#5

Test

Holes

Results

#6

#7

#8

#9

#10

## D. BUILDINGS

Name/Address

1. Rent All, 60 Water St.2. Willy & Son Small Engine3. Repair, Water St. (no basement)

4.

5.

Results

0%

Name/Address

6.

7.

8.

9.

10.

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie

C O U N T Y      O F      V I C T O R I A

4019

LINDSAY



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4019

Location..... LINDSAY  
COUNTY OF VICTORIA

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4019

LOCATION

Angeline & Pottinger

Lindsay

## Background

### Waste Disposal Practices

- Operated as a domestic solid waste disposal site by the Town of Lindsay from the mid 1930s to the mid 1950s.
- The domestic wastes were generally burned as a form of vermin control, therefore large quantities of ashes will be found in the site.
- The site is roughly 10 hectares in size with a reported maximum depth of approximately 5 metres.
- Information sources were the Engineering Department, Town of Lindsay; and, Mr. Jim Corley, local resident and son to the disposal site operator at the time.

### Land Uses

**Original** - Sand and gravel pit.

### Present Development

**On - site**

- Elgin Park.
- Portion of Parkview Public School and associated playfield.
- Tennis courts.
- Portion of Pottinger Avenue.

**Abutting**

North - Rosland Crescent and recently developed residential homes.

East - Adelaide Street, Pottinger Avenue, and Crescent Court with associated residential dwellings.

South - Angeline Street extension and residential dwellings.

West - Angeline Street.

### Present Site Owner

- Town of Lindsay.
- Victoria County Board of Education.

Morrison Beatty Limited | Gore & Storrie Limited



## Hydrogeologic Setting

### Geology

- regionally, the area is blanketed with a thin (3-10 m) clayey silt till
- locally, a narrow esker ridge has been mapped; the ridge is generally less than 200 m in width and 8 m in height
- the esker comprises sand and gravel and is easily identified on topographic maps by the presence of gravel pits

### Regional Drainage

- the site is within the watershed of the Scugog River, although there are no tributaries near the disposal area
- the area surrounding the site is serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the old landfill site occupies an old gravel pit in the esker ridge which passed through the property
- the maximum depth of fill is reported to be 5 m
- the site is maintained as a school playground and municipal park

### Topography and Drainage

- the topography of the fill site is rolling and irregular; the total relief on the site is about 2 m
- the fill surface has been sloped generally to the northwest corner of the school yard
- drainage is adequate except during the snow-melt period when considerable ponding occurs in depressions on the site

## Identified Impact

### Settlement & Erosion

- significant settlement of the landfill has caused depressions and uneven terrain over the entire site

### Vegetation Stress

- there were a few areas of vegetation stress close to the school and in the lowest part of the park; however, these areas flood every spring which may cause some of the vegetation stress

### Leachate

- leachate was not observed seeping from any area of the site; there are no streams in the area

### Methane Gas

- methane gas was not detected in any of the selected barhole locations in the landfill site
- none of the monitored buildings were found to have methane gas in the basement floor drain or other obvious entry points

## Potential Impacts

- off-site gas migration via the sandy overburden surrounding the site; homes on Angeline St, Pottinger St, Rosland Cresc, Rosemary St, and Adelaide St could be impacted
- gas migration into the school building which is apparently constructed on part of the fill

M-141279

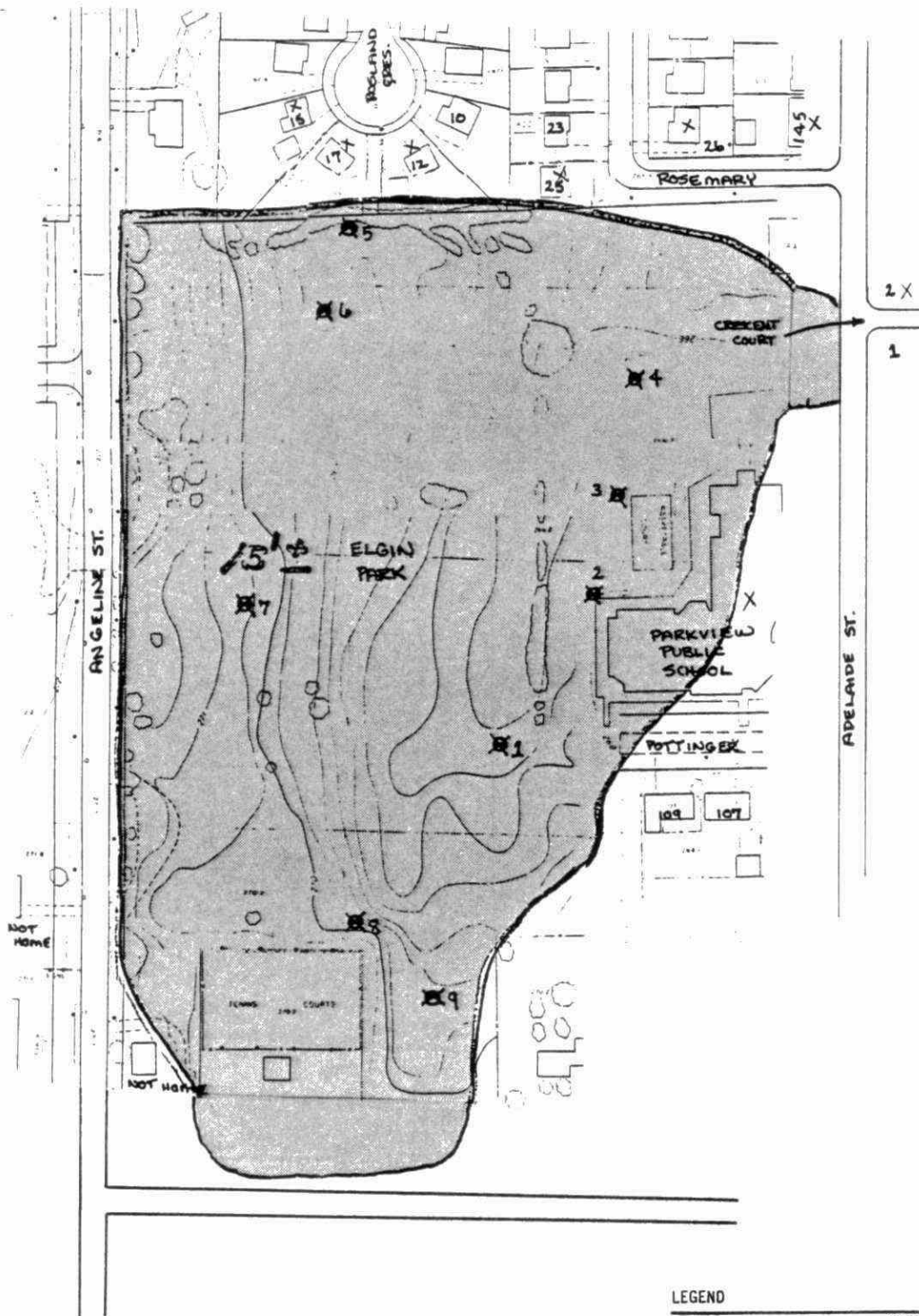
## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

| <u>LOCATION</u>                                                                                                                                             | <u>ESTIMATED<br/>NUMBER</u> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| - vicinity of foundation of Park View School                                                                                                                | 4                           |
| - backyard properties on Rosland Crescent and east side of Angeline Street                                                                                  | 5                           |
| - side yards abutting the fill on the properties of 109 and 107 Pottinger Street, 25 and 26 Rosemary Street, 145 Adelaide Street and 1 and 2 Crescent Court | 7                           |

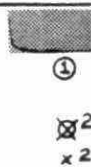


M-250780



LEGEND

WASTE DISPOSAL SITE  
WATER SAMPLE LOCATIONS  
GAS SAMPLE LOCATIONS  
- in field  
- in buildings



NOT TO SCALE

SITE NO. 4019  
LINDSAY

Morrison Beatty Limited  
Gore & Storrie Limited





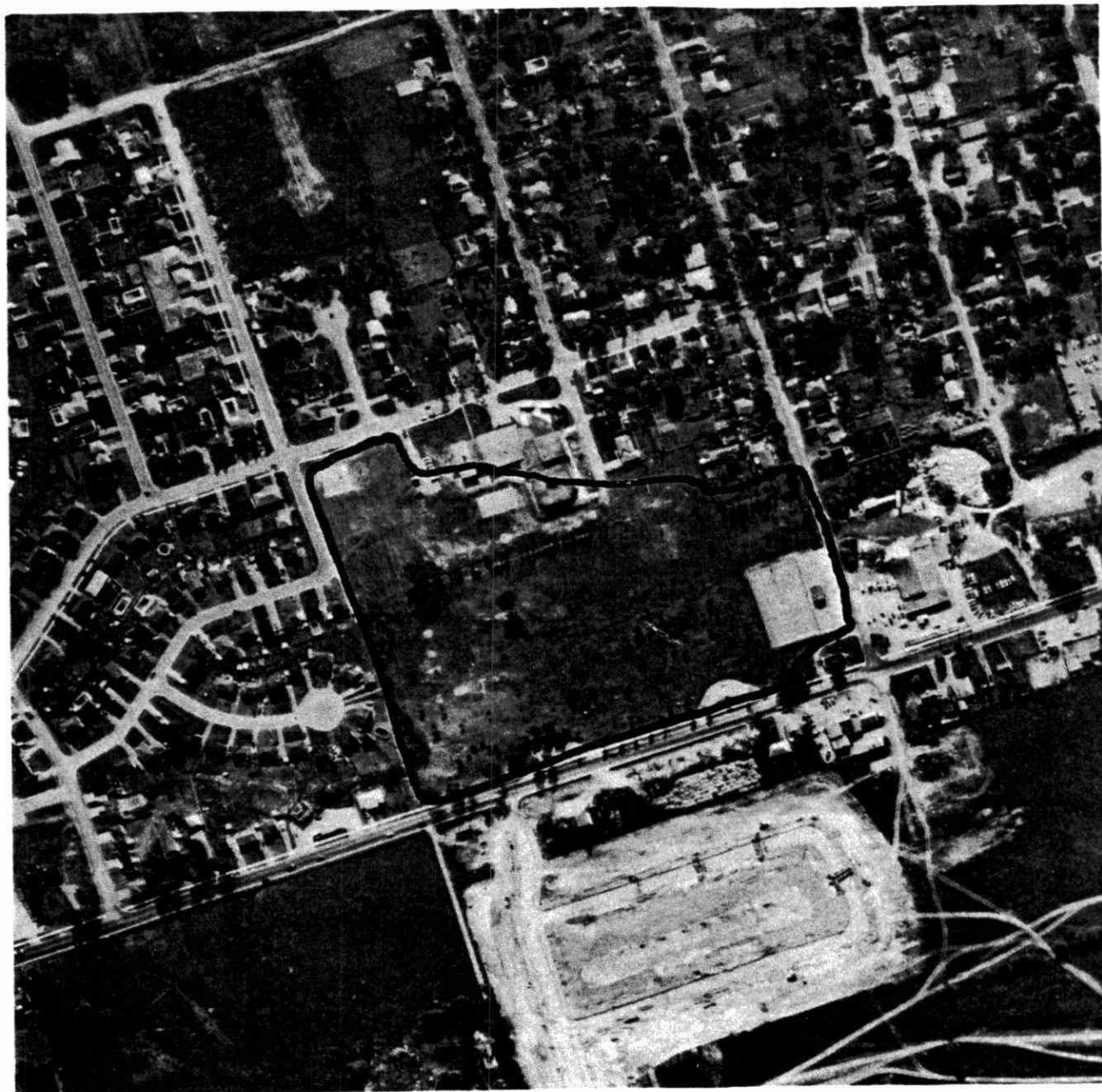
Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

4019



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

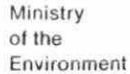
DISPOSAL  
AREA



SCALE 1:4500







FORM I  
(Site Identification Study)

MOE REGION CENTRAL REGION DATE Oct. 7, 1980 SITE IDENTIFICATION CODE 4019  
SITE Angeline & Pottinger, Lindsay  
(Lot, concession #, or UTM coordinates, name, address)

## MOE 1640A/80



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 4019 - Page 2

SITE Angeline & Pottinger, Lindsay con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

Test

Holes Results

Name/Address

Results

Name/Address

Results

#1  
#2  
#3  
#4  
#5

#6  
#7  
#8  
#9  
#10

1. 25 Rosemary Court 0%  
2. 15 Rosland Court 0%  
3. 17 Rosland Court 0%  
4. 12 Rosland Court 0%  
5. 10 Rosland Court (no one home)

6.  
7.  
8.  
9.  
10.

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie

C O U N T Y      O F      P E T E R B O R O U G H

4021            HARPER ROAD, PETERBOROUGH

4023            PETERBOROUGH AIRPORT

SEND  
TO

McKenley Roberts

Waste Site Evaluation Unit

Waste Management Br (2 St Clair Ave W)

FROM

J. P. Roussel (Pet. Office)

DEPT.

DATE

92-001-974-25/92

SUBJECT

Old Disposal Site Study by Morrison Beatty Limited  
and Gore & Storrie Limited.

Thank you for supplying me the information in the above report regarding ~~Harper Road~~ Site 4023, Peterborough Airport. I note that the write up is from Background & Recommendations apply to the Harper Rd site #4021. Similarly, the write up given for the Harper Rd site 4021 belongs to site 4023, Peterborough Airport.

REPLY

Please make the necessary changes in the report or notation for future record.

Thank you

*J. P. Roussel*

MOE - 705-743-2972

REPLY FROM

REPLY DATE



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number...4021

Location..... HARPER ROAD  
PETERBOROUGH  
COUNTY OF PETERBOROUGH

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4021

LOCATION

N. Monaghan Township

Peterborough Airport

## Background

### Waste Disposal Practices

- This site was originally owned by Mr. Harry Oakman of Peterborough during the actual disposal operation. This operation was to facilitate fill for the proposed realignment of runways when this airport was privately operated. The proposal was abandoned when the City obtained ownership.
- The airport property consists of 194 hectares, parts of Lots 2, 3, 4 and 5 and all of Lot 6. Concession 8, North Monaghan Township. The garbage fill area is confined to area in Lots 5 and 6. This is about 2 to 3 hectares of refuse.
- The Peterborough Airport is about 10 years old.
- The airport maintenance employees have rearranged fill on all parts of the airport and found garbage only in the area as shown on the sketch.

### Land Uses

**Original** - Low lying swamp land.

### Present Development

**On - site** - Grass runways, hangers and the main airport office building.

**Abutting** - Airport buildings and runways at Peterborough Airport.

### Present Site Owner

- City of Peterborough.

Morrison Beatty Limited | Gore & Storrie Limited



## Hydrogeologic Setting

### Geology

- the disposal site is underlain by Lake Iroquois sand deposits

### Regional Drainage

- the site is located on lowland about one km west of the Otonabee River
- drainage in the general area is poor, with many swamps and wetlands

## Disposal Site Detail

### Fill Characteristics

- the refuse was deposited in a wetland area
- the fill depth ranges up to about 5 m
- much of the fill was regraded and rearranged during construction of the Peterborough airport; the buildings and portions of the runways are on the fill

### Topography and Drainage

- the surface of the fill was regraded to form the landing strips for the airport
- although most of the filled lands are above the watertable, drainage in the surrounding lowland areas is poor

## Identified Impact

### Settlement & Erosion

- the grassed runways appeared flat and smooth; these are still used for light aircraft landings
- erosion is not a significant problem

### Vegetation Stress

- the landfill area is covered by sparse decayed grass and weeds; this is probably caused by the airplane traffic on the site

### Leachate

- leachate seepage was discovered along the old runways into the swampy sections to the west and the pond areas between runways

### Methane Gas

- methane gas was detected at one location in the fill site at a concentration of 50%
- methane was not observed at all other locations on the site and one location south of the fill area

## Potential Impacts

- gas migration into the Peterborough Airport building which is situated on the site

## Recommendations

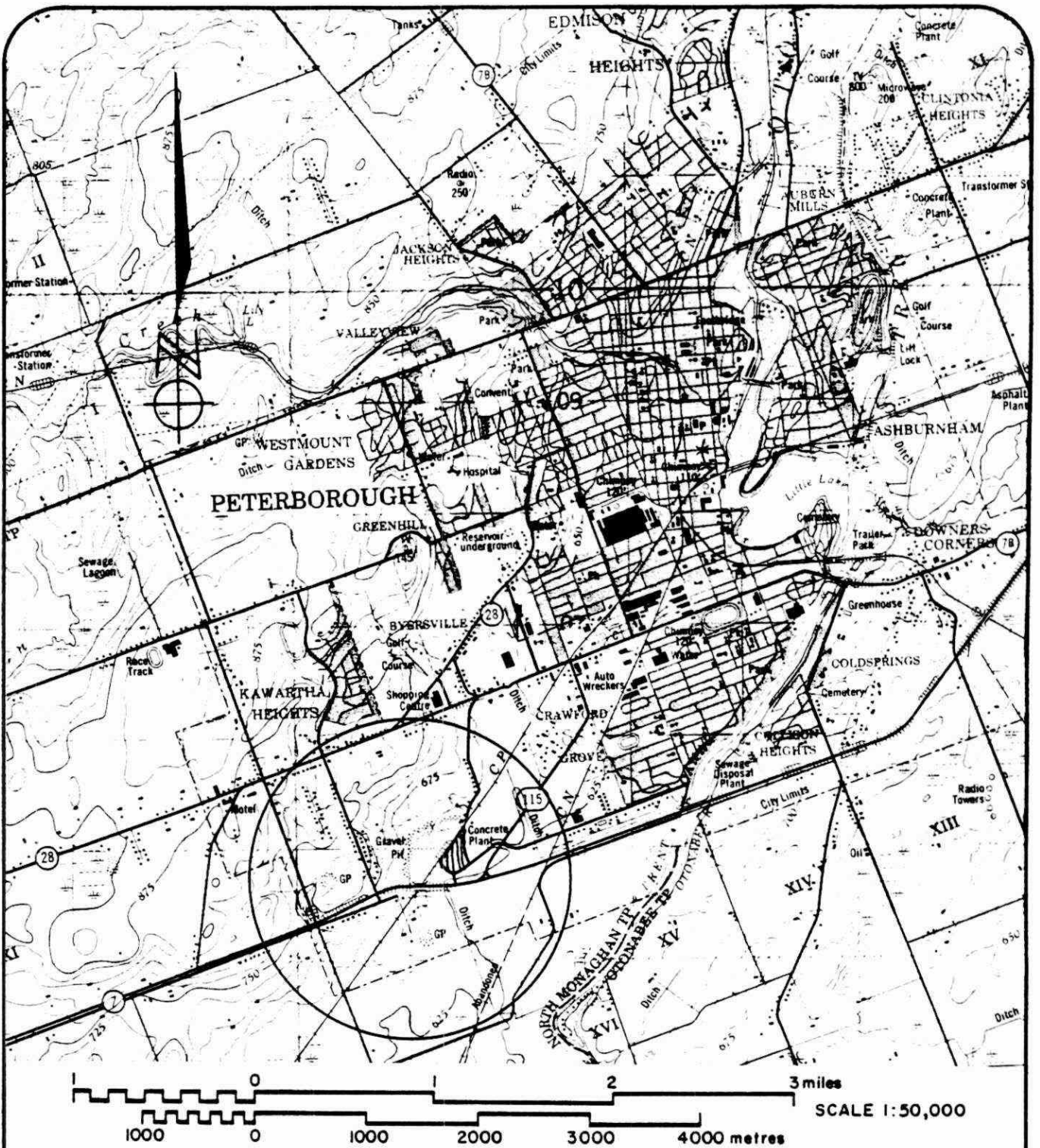
1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

### LOCATION

### ESTIMATED NUMBER

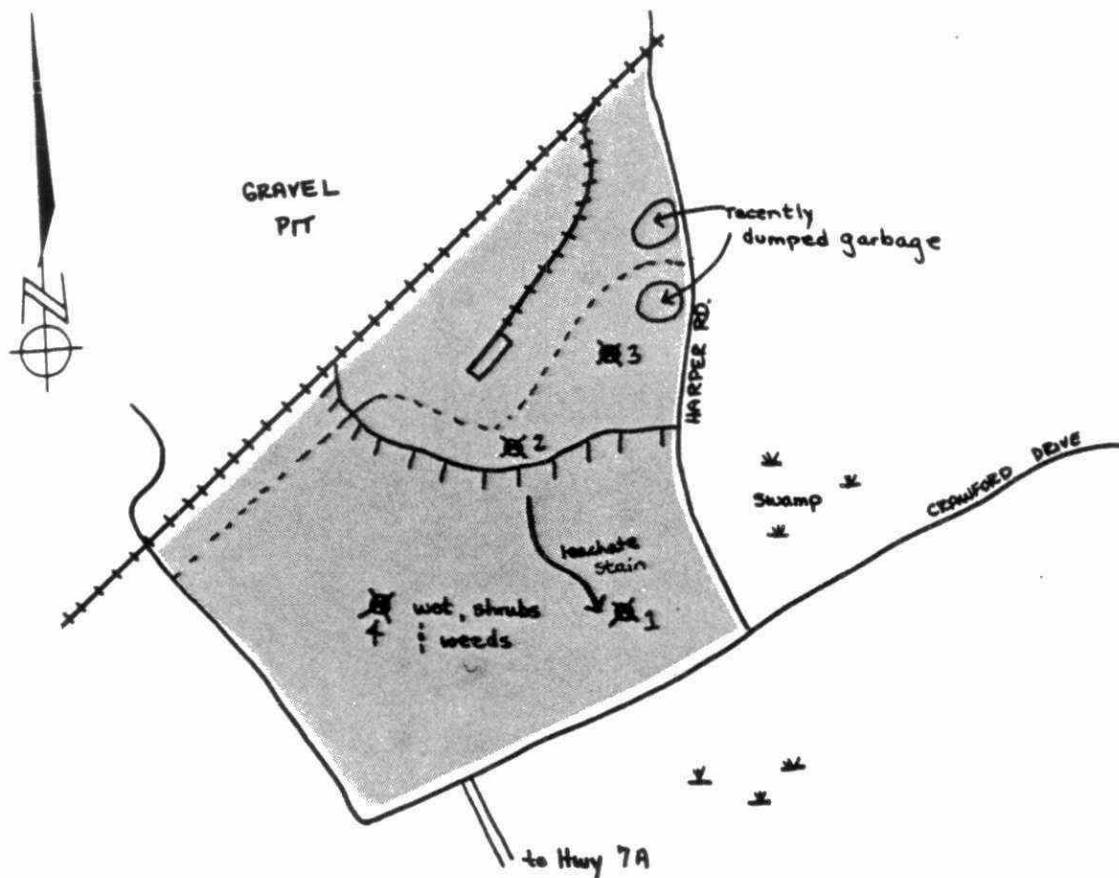
-- perimeter of the Peterborough Airport  
office building

6



SITE NO. 4021  
PETERBOROUGH

Morrison Beatty Limited  
Gore & Storrie Limited



## LEGEND

|                        |                                                                                       |
|------------------------|---------------------------------------------------------------------------------------|
| WASTE DISPOSAL SITE    |  |
| WATER SAMPLE LOCATIONS | ①                                                                                     |
| GAS SAMPLE LOCATIONS   |                                                                                       |
| - in field             | ⊗ <sup>2</sup>                                                                        |
| - in buildings         | x <sup>2</sup>                                                                        |

NOT TO SCALE

SITE NO. 4021  
PETERBOROUGH

Morrison Beatty Limited  
Gore & Storrie Limited





Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

4021



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:6670







FORM I  
(Site Identification Study)

MOE REGION CENTRAL REGION DATE Oct. 7, 1980 SITE IDENTIFICATION CODE 4021  
SITE Con. XI, Lot 8 Peterborough, A. Patterson Property  
(Lot, concession #, or UTM coordinates, name, address)

## MOE 1640A/80



Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4023

Location.....PETERBOROUGH AIRPORT  
COUNTY OF PETERBOROUGH

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

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Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4023

LOCATION

Harper Road

Peterborough

## Background

### Waste Disposal Practices

- Operated by the City of Peterborough as a domestic and industrial waste disposal site from the mid 1940's to the mid 1960's.
- Residents remember that any wastes including industrial were disposed in the site.
- The area of the site is roughly 4 hectares with an average depth of 3 to 5 metres.
- Information sources were Mr. Sid Hendry, Clerk and Mr. J. Hooper, Engineer, both from the City of Peterborough.

### Land Uses

**Original** - Undeveloped, vacant land.

### Present Development

**On - site**

- Vacant wet land with reeds and shrub growth.
- It is bounded by higher, drier land to the north and west.
- A fill cover consisting of larger rubble and gravel.
- Recent dumpings near the access road.

**Abutting**

- North - Vacant undeveloped land.
- West - Sand and gravel quarry.
- South - Vacant undeveloped land.
- East - Harper Road and vacant land.

### Present Site Owner

- Mr. A. Patterson.

Morrison Beatty Limited | Gore & Storrie Limited

## Hydrogeologic Setting

### Geology

- the general area of the site is underlain by Lake Iroquois sand deposits

### Regional Drainage

- the disposal site is within the watershed of the Otonabee River, southward about 2 km to the southwest
- the site is near the base of a high till ridge; groundwater discharge at the base of the ridge maintains permanent wetlands east and south of the site

## Disposal Site Detail

### Fill Characteristics

- fill has been placed at two areas on the site; a recent area at the south end of a major gravel pit, and an older area along the west side of the CP railway
- the fill appears to be 3 to 5 m in depth and has not been adequately covered or vegetated

### Topography and Drainage

- the surface of the fill is relatively flat, with steep embankments around the low-lying periphery
- drainage at the site is poor due to the high water table and generally swampy conditions east and south of the site

## Identified Impact

### Settlement & Erosion

- this site has been left in an unfinished state; final grading application of topsoil and vegetation has not been carried out
- erosion has occurred on the unstabilized slope in the northern portion of the site

### Vegetation Stress

- there are many areas of sparse decayed vegetation; however, this may be due to the poor quality cover
- the lower, wet area had a lush vegetative cover

### Leachate

- there are no watercourses in the area and no leachate seepages were noted at the time of inspection; however staining of the surface below the toe of the fill indicates seasonal seepage

### Methane Gas

- methane gas was not detected in any barhole location on this site
- there are no buildings in the vicinity

## Potential Impacts

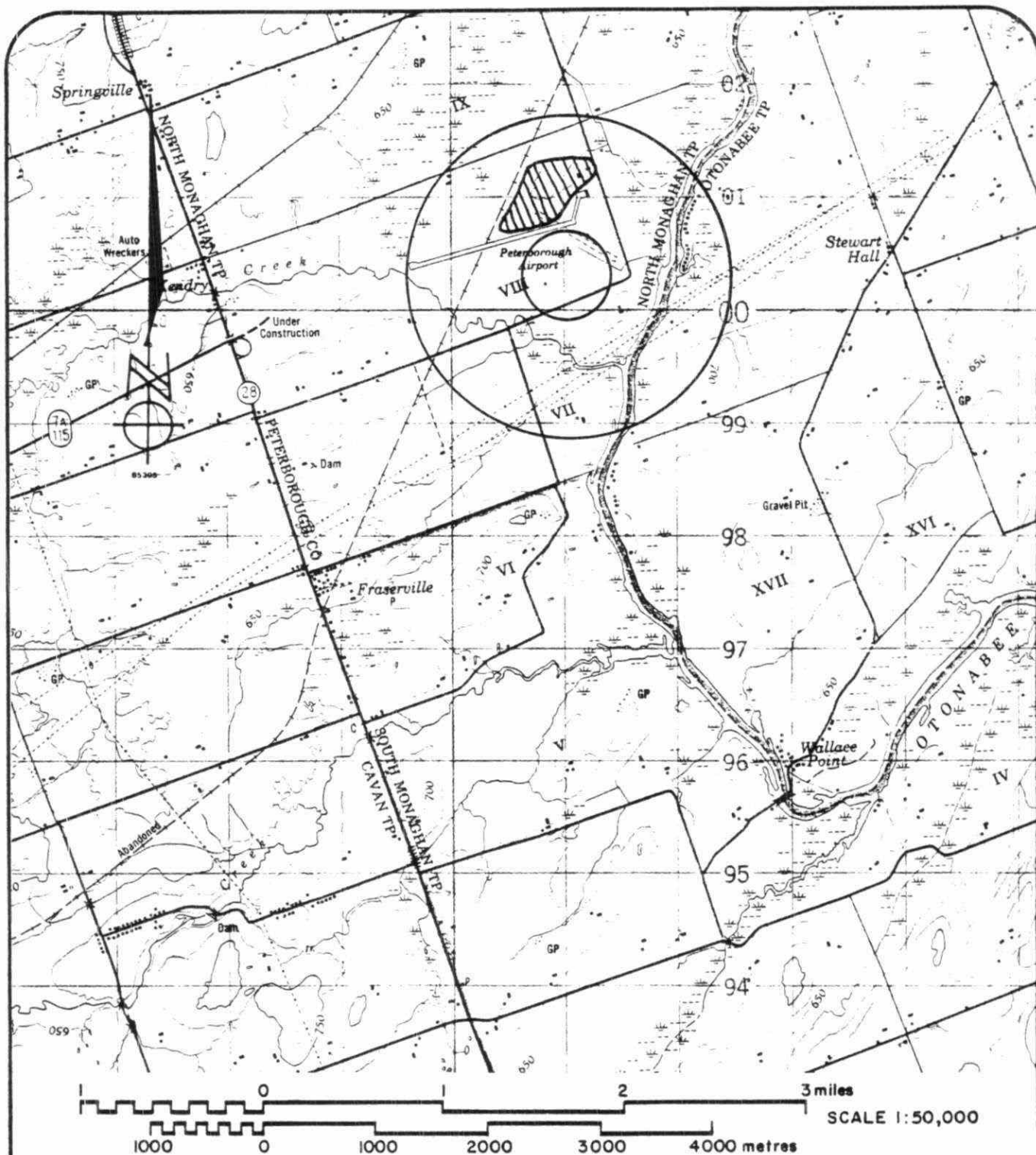
- no apparent impacts from leachate or methane gas migration due to the isolated area in which the site is situated

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
  
2. No further studies are required.

M-141278





SITE NO. 4023  
PETERBOROUGH

Morrison Beatty Limited  
Gore & Storrie Limited



WASTE DISPOSAL SITE  
WATER SAMPLE LOCATIONS  
GAS SAMPLE LOCATIONS  
- in field  
- in buildings

SITE NO. 4023  
PETERBOROUGH

**Morrison Beatty Limited**  
**Gore & Storrie Limited**



Ontario

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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

4023



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:6670





Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 7, 1980 SITE IDENTIFICATION CODE 4023  
SITE Con. VIII, Lot 6, N. Managhan Twp. Harold R. Oakman Property (Peterborough Airport)  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

#### I Leachate

##### A. WATER BODIES WITHIN 100 METRES

Parameter mg/l

- 1) Chlorides
- 2) pH
- 3) Iron
- 4) Alkalinity
- 5) Conductivity  $\mu\text{mhos}$

| Results |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|----|
| 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 61      |   |   |   |   |   |   |   |   |    |
| 7       |   |   |   |   |   |   |   |   |    |
| 14      |   |   |   |   |   |   |   |   |    |
| 171     | 2 |   |   |   |   |   |   |   |    |
| 200     |   |   |   |   |   |   |   |   |    |

##### B. WELLS WITHIN 100 METRES

Parameter

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| Results |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|----|
| 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |
|         |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

#### II Gas

##### C. ON-SITE

| Test Holes | Results | Test Holes | Results |
|------------|---------|------------|---------|
| #1         | 50%     | #6         |         |
| #2         | 0%      | #7         |         |
| #3         | 0%      | #8         |         |
| #4         | 0%      | #9         |         |
| #5         | trace   | #10        |         |

##### D. BUILDINGS

| Name/Address                   | Results | Name/Address | Results |
|--------------------------------|---------|--------------|---------|
| 1. <u>Peterborough Airport</u> |         | 6. _____     |         |
| 2. <u>Building</u>             | 0%      | 7. _____     |         |
| 3. _____                       |         | 8. _____     |         |
| 4. _____                       |         | 9. _____     |         |
| 5. _____                       |         | 10. _____    |         |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie

C O U N T Y      O F      N O R T H U M B E R L A N D

4017

COBOURG







Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4017

Location..... COBOURG  
COUNTY OF NORTHUMBERLAND

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4017

LOCATION

Lake and Water Sts.

Cobourg

## Background

### Waste Disposal Practices

- Operated as a municipal garbage disposal site in the 1920's by the Town of Cobourg. The site was closed about 1930.
- The fill varies in depths up to 9 metres deep as evidenced by a local resident while excavating for his basement.
- The thickness of the cover is about  $\frac{1}{2}$  metre deep.
- Large quantities of ashes, tannery wastes, metal parts exist in the site.
- Information sources included Mr. K. Rumball, Town Engineer and Mr. Ed Jenkins, retired Public Works Superintendent.

### Land Uses

Original - Limestone quarry.

### Present Development

On - site - Residential housing

### Abutting

North - Residential dwellings of Water Street.  
South - Residential dwellings of Lake Street; Lake Ontario.  
West - 1 Residential dwelling of Henry Street.  
East - School playground.

### Present Site Owner

- Private residential property owners.

## Hydrogeologic Setting

### Geology

- the old disposal site is located in a limestone quarry; the quarry was reported to be 3-9 m in depth

### Regional Drainage

- the site is located on the shoreline of Lake Ontario
- the entire area is served by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the fill material has been encountered in many of the house excavations on the site; most excavations are extended to the bedrock floor of the quarry
- the wastes reported are generally ashes, scrap metal, glass, etc; organic and normal domestic wastes were not encountered
- the site has been treed and landscaped by the owners

### Topography and Drainage

- the disposal site has been filled to original grade; the surface slopes gently toward the lake
- total relief on the site is about 3 m
- a small depression in the centre of the fill collects local runoff; however, the general drainage is toward Lake Ontario

## Identified Impact

### Settlement & Erosion

- very little settlement was observed
- most of the properties have had their yards built up with new fill and topsoil to bring them to street level
- although the houses are built on top of the fill, there are no observed or reported structural problems with any of the houses

### Vegetation Stress

- there were no signs of vegetation stress caused by the presence of the landfill site

### Leachate

- leachate is not a problem at this site

### Methane Gas

- methane gas was not detected at any location in the landfill site or in any of the monitored homes

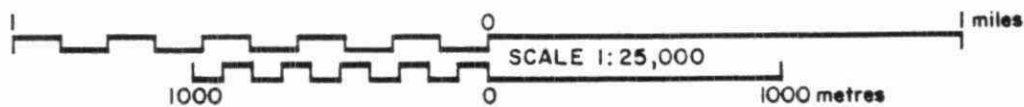
## Potential Impacts

- no anticipated hazards due to leachate, settlement or gas migration due to the age of the site, and the presence of about 14 homes on the fill area

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses.
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

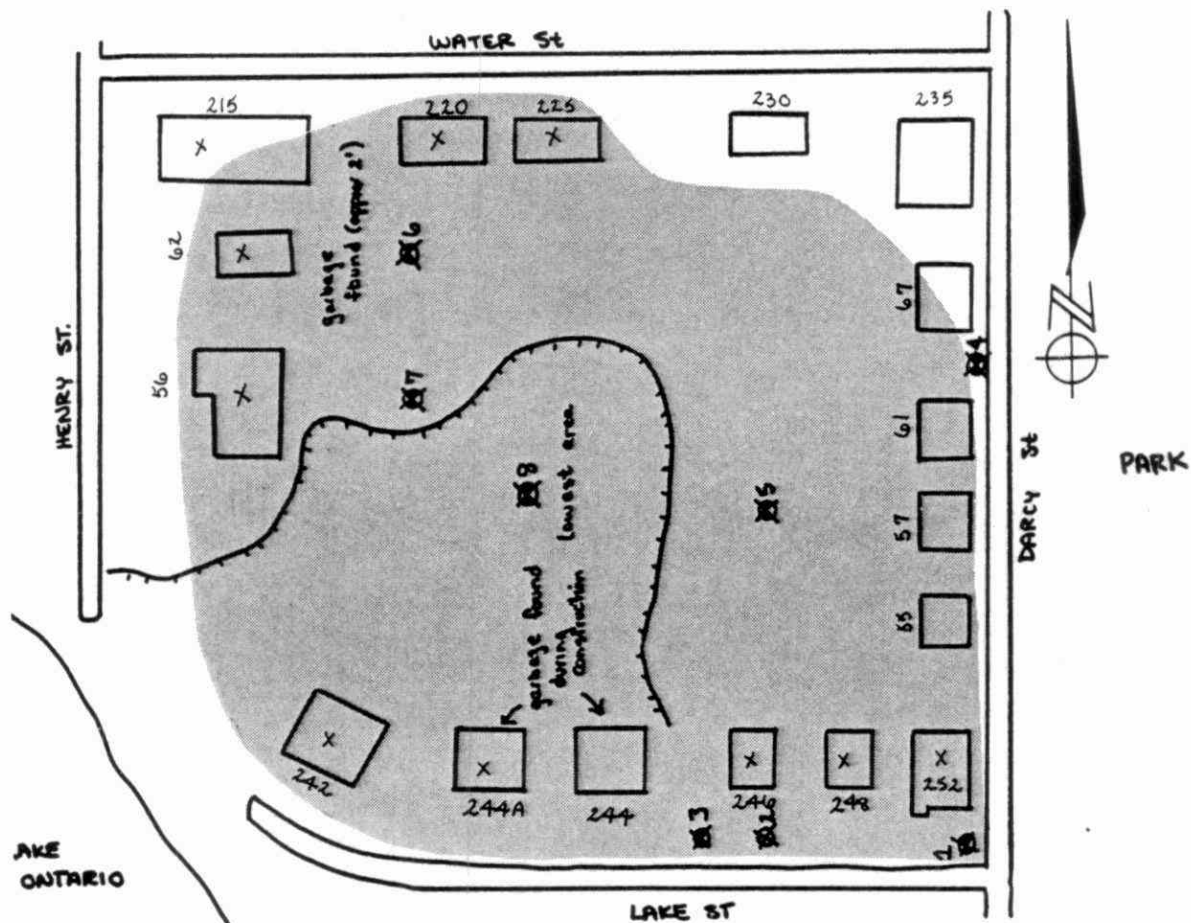
M-141279



SITE NO. 4017  
COBOURG

Morrison Beatty Limited  
Gore & Storrie Limited





## LEGEND

WASTE DISPOSAL SITE  
 WATER SAMPLE LOCATIONS  
 GAS SAMPLE LOCATIONS  
 - in field  
 - in buildings

③

X

X

NOT TO SCALE

SITE NO. 4017  
 COBOURG

Morrison Beatty Limited  
 Gore & Storrie Limited



Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

4017



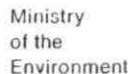
Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





FORM I  
(Site Identification Study)

MOE REGION CENTRAL REGION DATE Oct. 8, 1980 SITE IDENTIFICATION CODE 4017  
SITE Water St. & Lake St., Cobourg  
(Lot, concession #, or UTM coordinates, name, address)

I Leachate

## B. WELLS WITHIN 100 METRES

[illegible][illegible]

Any significant odour problems      Yes \_\_\_\_\_      No \_\_\_\_\_      Comments \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Required, Yes          No          If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

## II Gas

### C. ON-SITE

#### D. BUILDINGS

| Test Holes | Results | Test Holes | Results | Name/Address     | Results        | Name/Address     | Results       |
|------------|---------|------------|---------|------------------|----------------|------------------|---------------|
| #1         | 0%      | #6         | 0%      | 1. 55 Darcy St.  | (no one home)  | 6. 230 Water St. | (no one home) |
| #2         | 0%      | #7         | 0%      | 2. 57 Darcy St.  | (no one home)  | 7. 225 Water St. | 0%            |
| #3         | 0%      | #8         | 0%      | 3. 61 Darcy St.  | (no one home)  | 8. 215 Water St. | 0%            |
| #4         | 0%      | #9         |         | 4. 67 Darcy St.  | (no one home)  | 9. 62 Henry St.  | 0%            |
| #5         | 0%      | #10        |         | 5. 235 Water St. | (120 yrs. old) | 10. 56 Henry St. | 0%            |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 4017 - Page 2

SITE Water St. & Lake St., Cobourg can't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

Test

Holes Results

Name/Address

Results

Name/Address

Results

#1  
#2  
#3  
#4  
#5

#6  
#7  
#8  
#9  
#10

1. 242 Lake St. 0%  
2. 244-A Lake St. 0%  
3. 244 Lake St. (no one home)  
4. 246 Lake St. 0%  
5. 248 Lake St. 0%

6. 252 Lake St. 0%  
7. \_\_\_\_\_  
8. \_\_\_\_\_  
9. \_\_\_\_\_  
10. \_\_\_\_\_

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Nancy Rennie

C O U N T Y      O F      S I M C O E

|      |                          |
|------|--------------------------|
| 4104 | BARRIE                   |
| 4109 | COCHRANE & WEST, ORILLIA |
| 4113 | ALLISTON                 |
| 4115 | COLLINGWOOD              |
| 4128 | WESTERN & WEST, ORILLIA  |



COUNTY OF SIMCOE





Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4104

Location..... BARRIE  
COUNTY OF SIMCOE

Morrison Beatty Limited

Gore & Storrie Limited



Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4104

LOCATION

Sandford & Brock Sts.

Barrie

## Background

### Waste Disposal Practices

- Operated by the City of Barrie in the late 1950's as a domestic waste disposal site. The site was closed in 1950 or 1951.
- The site is roughly 3/4 hectare in area with a peak depth of 3 metres. It is estimated that over 270 thousand cubic metres of material have been placed in the site.
- Information source included Mr. Neil Fox, Public Works Superintendent, City of Barrie.

### Land Uses

Original - Undeveloped land.

### Present Development

On - site

- Apartment building.
- Vacant undeveloped land.
- A creek running in an easterly direction through the site.

Abutting

North - Single family residences.

West - Sanford Street and single family residences.

- Undeveloped land.

East - 6 single family residences and an automotive garage on Bradford Street.

South - 6 single family residences on Brock Street.

### Present Site Owner

- The vacant lot portion of the landfill site is owned by Mr. Robert Birrell of Oro.

Morrison Beatty Limited | Gore & Storrie Limited

## Identified Impact

### Settlement & Erosion

- significant settlement depressions occur over the landfill area
- subsidence has occurred near the apartment on Sanford Street; cracks and depressions were noted in the paved parking areas

### Vegetation Stress

- areas of decayed vegetation were observed over the entire site; especially along the street pavement on Sanford Street

### Leachate

- there are several minor leachate springs along the banks of the stream which flows through the landfill; however, there were no significant changes in the water quality between upstream and downstream sampling points

### Methane Gas

- methane gas concentrations of up to 69% were recorded in the landfill site; a concentration of 57.5% was recorded within 7.5 m of the residence at 56 Sanford Street and 45% within 4.5 m of the apartment building on Sanford Street
- no methane was detected in any of the monitored buildings

## Potential Impacts

- gas migration into the abutting residential buildings on Sanford Street, Brock Street and Bradford Street via granular bedding in service trenches or the sand deposits in the area

## Hydrogeologic Setting

### Geology

- regionally, the site is situated in the sand deposits of post-glacial Lake Algonquin

### Regional Drainage

- the site is drained by a small stream which flows east through the north edge of the site; this stream empties into Kempenfelt Bay of Lake Simcoe

## Disposal Site Detail

### Fill Characteristics

- refuse was mainly domestic; there are a number of landfill sites to the west of this site
- the depth of the refuse has not been determined
- the site is grass covered and is rough-cut several times a year

### Topography and Drainage

- the site has a slight grade towards the lake but is generally flat
- a stream cuts through the garbage at the north edge of the site; it then flows east to the bay

## Recommendations

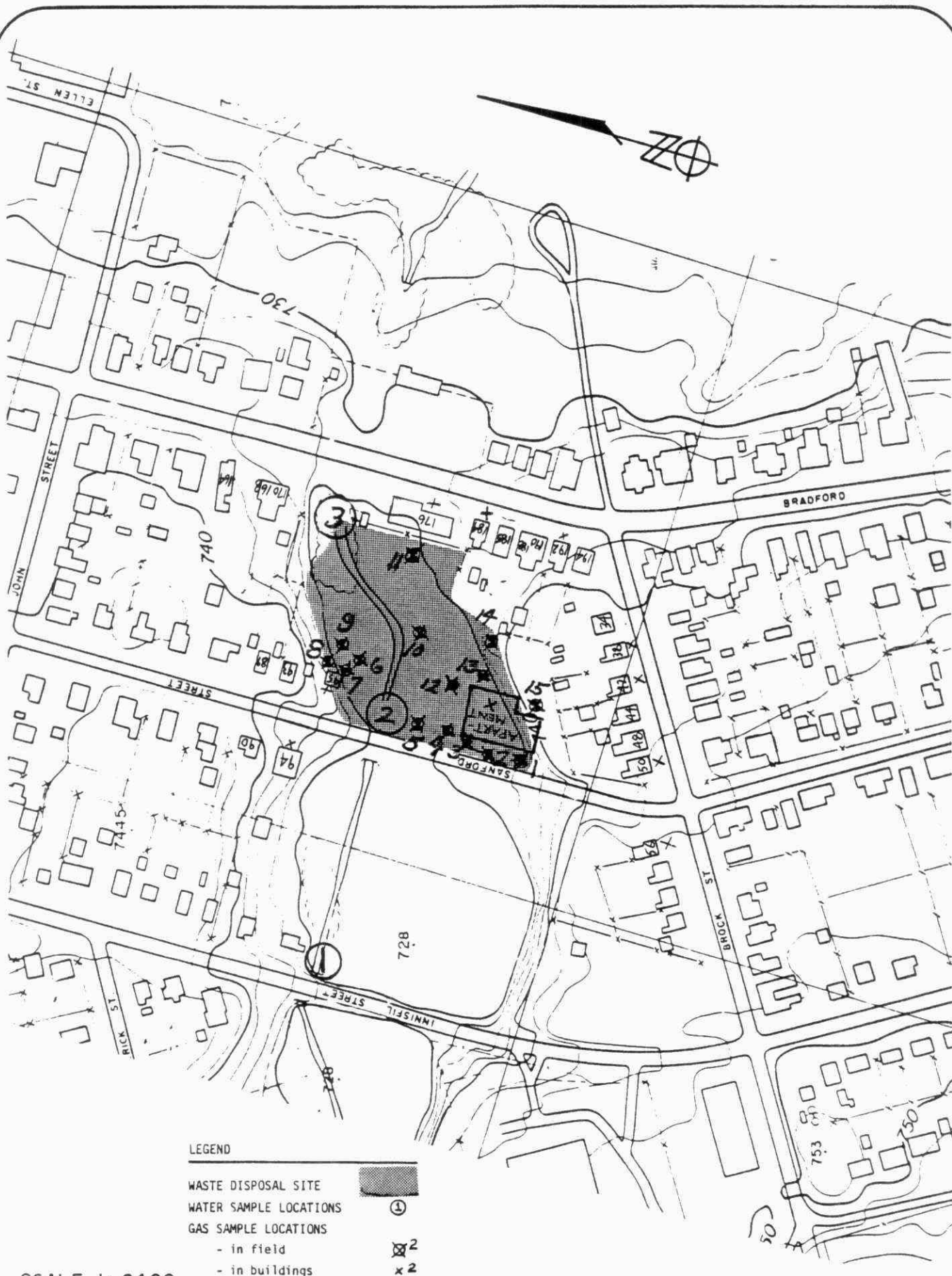
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  - (a) identify the "limits of fill" on the Official Plan,
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  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.
5. A comprehensive analysis of leachate collected from the identified seepage points should be conducted.

| <u>LOCATION</u>                                                                                                                                       | <u>ESTIMATED<br/>NUMBER</u> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| - in the vicinity of the foundation of the apartment building on Sanford Street                                                                       | 4                           |
| - in the backyards of the properties abutting the site on Brock Street and Bradford Street; including the Mr. Transmission and Rent-a-Wreck building. | 10                          |





M-221080



SITE NO. 4104  
BARRIE

Morrison Beatty Limited  
Gore & Storrie Limited



Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

4104



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 1, 1980 SITE IDENTIFICATION CODE 4104  
SITE Sanford & Brock, Barrie  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

|                            | 1   | 2   | 3   | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|-----|-----|-----|---|---|---|---|---|---|----|
| 1) Chlorides mg/l          | 46  | 53  | 53  |   |   |   |   |   |   |    |
| 2) pH                      | -   | 7.5 | 9.0 |   |   |   |   |   |   |    |
| 3) Iron mg/l               | -   | 1.5 | 1.6 |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l         | -   | 196 | 191 |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 388 | 405 | 400 |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes        No        Comments       

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes        No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

###### Test

###### Holes Results

###### Test

###### Holes Results

###### Name/Address

###### Results

###### Name/Address

###### Results

|    |       |     |       |                                         |    |                                        |    |
|----|-------|-----|-------|-----------------------------------------|----|----------------------------------------|----|
| #1 | 14.0% | #6  | 25.0% | 1. 89 Sanford St. (house) (no one home) |    | 6. 34 Brock St. (house) (no one home)  |    |
| #2 | 0%    | #7  | 0%    | 2. 90 Sanford St. (house) (no one home) |    | 7. 38 Brock St. (house)                | 0% |
| #3 | 17.0% | #8  | 0%    | 3. 93 Sanford St. (house) (no one home) |    | 8. 42 Brock St. (house)                | 0% |
| #4 | 0%    | #9  | 57.5% | 4. 94 Sanford St. (house)               | 0% | 9. 44 Brock St. (house) (no one home)  |    |
| #5 | 24.0% | #10 | 7.0%  | 5. 95 Sanford St. (house)               | 0% | 10. 48 Brock St. (house) (no one home) |    |

III General Comments (vegetation, leachate springs, depth, etc.)       

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ 4104 - Page 2

SITE Sanford & Brock, Barrie con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2)
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

# 11 0%  
# 12 69.0%  
# 13 46.0%  
# 14 8.0%  
# 15 0%

Test

Holes Results

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

Name/Address

1. 50 Brock St. (house) 0%  
2. 56 Brock St. (house) 0%  
3. 164 Bradford St. (house) (no one home)  
4. 168 Bradford St. (house) (no one home)  
5. 170 Bradford St. (house) (no one home)

Results

Name/Address

6. Rent-A-Wreck, 176 Bradford St. 0%  
7. Mr. Transmission, 176 Bradford St. 0%  
8. 184 Bradford St. (house) 0%  
9. 188 Bradford St. (house) (no one home)  
10. 190 Bradford St. (house) (no one home)

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



Ministry  
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Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ 4104 - Page 3  
SITE Sanford & Brock, Barrie con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

###### Test

###### Test

###### Holes

###### Results

###### Holes

###### Results

###### Name/Address

###### Results

###### Name/Address

###### Results

#1

#6

1. 192 Bradford St. (house)

0%

6.

#2

#7

2. 194 Bradford St. (house) (no one home)

7.

#3

#8

3. Sanford St. Apartments

0%

8.

#4

#9

4.

9.

#5

#10

5.

10.

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister





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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4109

Location..... COCHRANE & WEST,  
ORILLIA  
COUNTY OF SIMCOE

Morrison Beatty Limited

Gore & Storrie Limited





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of the  
Environment

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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4109

LOCATION  
Cochrane & West Sts.  
Orillia

## Background

### Waste Disposal Practices

- Operated by the City of Orillia as a domestic solid waste disposal site in the 1930's and early 1940's.
- The site was closed in the mid 1940's.
- The site was filled in a scattered fashion with a maximum depth of 3.5 metres at the northern portion of the site.
- The total area of the site is roughly 9 hectares.
- Discussion with workers at Dorcan suggests that there is about 3.5 metres of landfill beneath the northeast portion of the Dorcan buildings immediately adjacent to Queen Street.
- Information sources: Mr. Jack Hunter, City of Orillia Works Department; Mr. Vince English, Dorcan employee; Mr. Walter Reid, 61 Cochrane Street, Orillia.

### Land Uses

- Original**
- An old gravel quarry where the Dominion Lumber property is now situated (i.e., northeast corner of the site).

## Present Development

- On - site**
- Dorcan factory and associated buildings as well as the adjacent unpaved storage area.
  - Lumber storage area of Dominion Lumber Limited.
  - Open travel roads of Dorcan Limited.

- Abutting**
- North - Queen Street and a railway line including a 300 foot buffer of vacant land between the street and rail line.
  - West - West Street and industrial factory.
  - South - Cochrane Street and Canada Wood Industries; one home owned by Mr. Walter Reid of 61 Cochrane Street.
  - East - Residential homes; Thor Motors car dealership.

## Present Site Owner

- Dorcan Limited.
- Dominion Lumber Limited

Morrison Beatty Limited | Gore & Storrie Limited

## Identified Impact

### Settlement & Erosion

- there are no significant signs of settlement on the site
- erosion has not occurred at any location on this site

### Vegetation Stress

- vegetation is sparse due to factory and warehouse development, vehicular traffic on the site and the poor quality soil cover

### Leachate

- leachate seepage was not observed at this site
- water quality did not change significantly between the upstream and downstream sampling points

### Methane Gas

- methane gas concentrations of up to 5% were recorded in the immediate vicinity of Dorcan warehouse and machine shop
- no methane was detected in barholes placed out of the filled area or in any of the monitored residences, factories or warehouses
- trace readings of methane were obtained while monitoring foundation cracks of the Dorcan building adjacent to Queen Street

## Potential Impacts

- gas migration into poorly vented portions of the on-site warehouses and buildings

M-141279

## Hydrogeologic Setting

### Geology

- regionally, the site is situated in the sand deposits of Lake Algonquin

### Regional Drainage

- drainage of the area is east to Lake Couchiching via Woollen Mills Ditch which flows along the northern edge of the site

## Disposal Site Detail

### Fill Characteristics

- the refuse is about 7 m deep on the Dominion Lumber property; this is the maximum thickness of fill
- the surface is covered with foundry sand, ash and clean fill
- the majority of the surface is gravel parking area, therefore vegetation is sparse

### Topography and Drainage

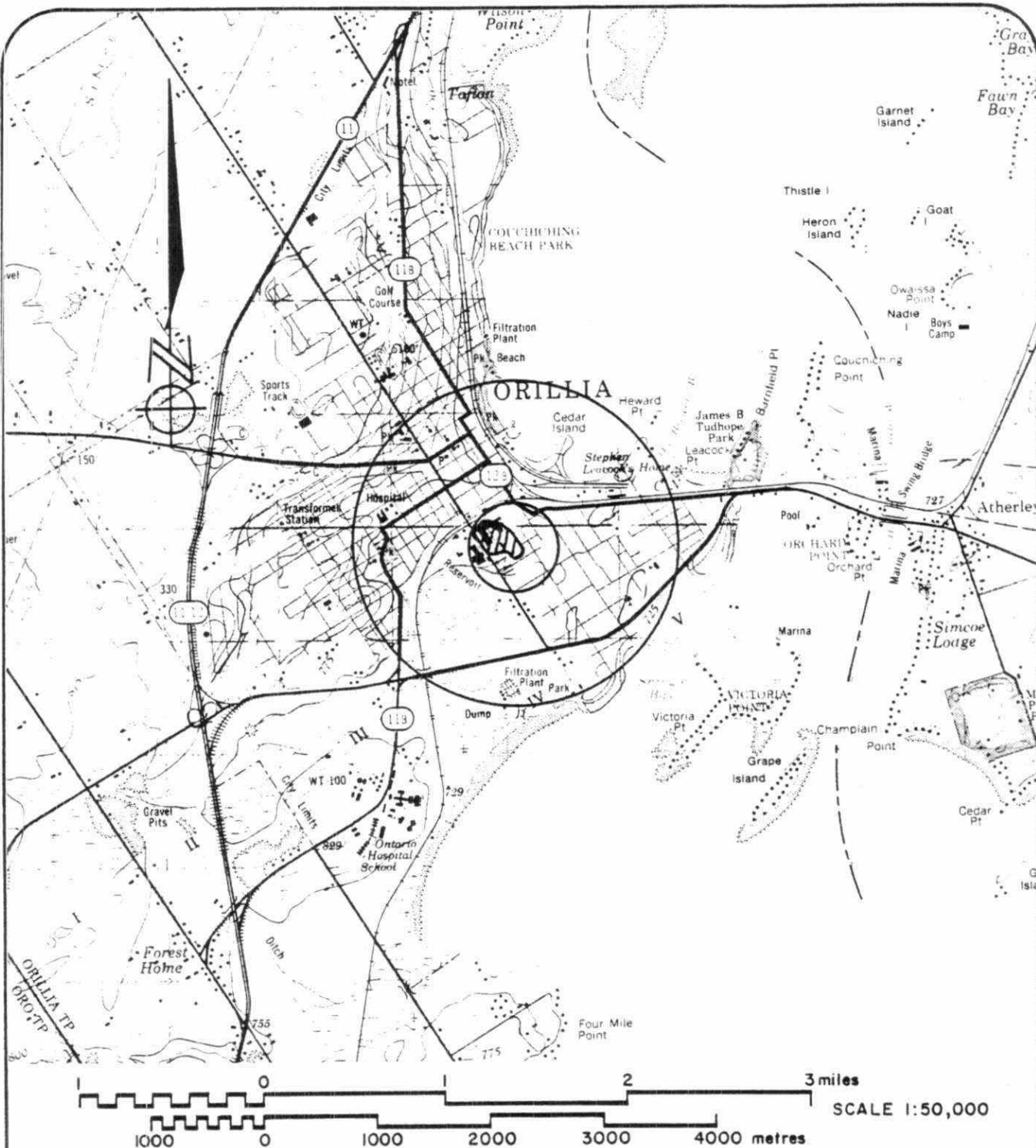
- the landfill site is generally flat
- the majority of drainage is to the northeast to Woollen Mills Ditch; a small portion of the site drains to the southwest

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

| <u>LOCATION</u>                                                                                              | <u>ESTIMATED<br/>NUMBER</u> |
|--------------------------------------------------------------------------------------------------------------|-----------------------------|
| - in the vicinity of the foundations of:                                                                     |                             |
| Dorcan building                                                                                              | 5                           |
| Dominion Lumber                                                                                              | 2                           |
| Thor Motors                                                                                                  | 2                           |
| Canada Wood building                                                                                         | 2                           |
| - in the backyards of the properties on Poughkeepsie Street; including 82, 86, 88 and 90 Poughkeepsie Street | 4                           |
| - in the backyards of the properties on Matchedash Street South; including 219, 220, 221, 223 and 225        | 5                           |

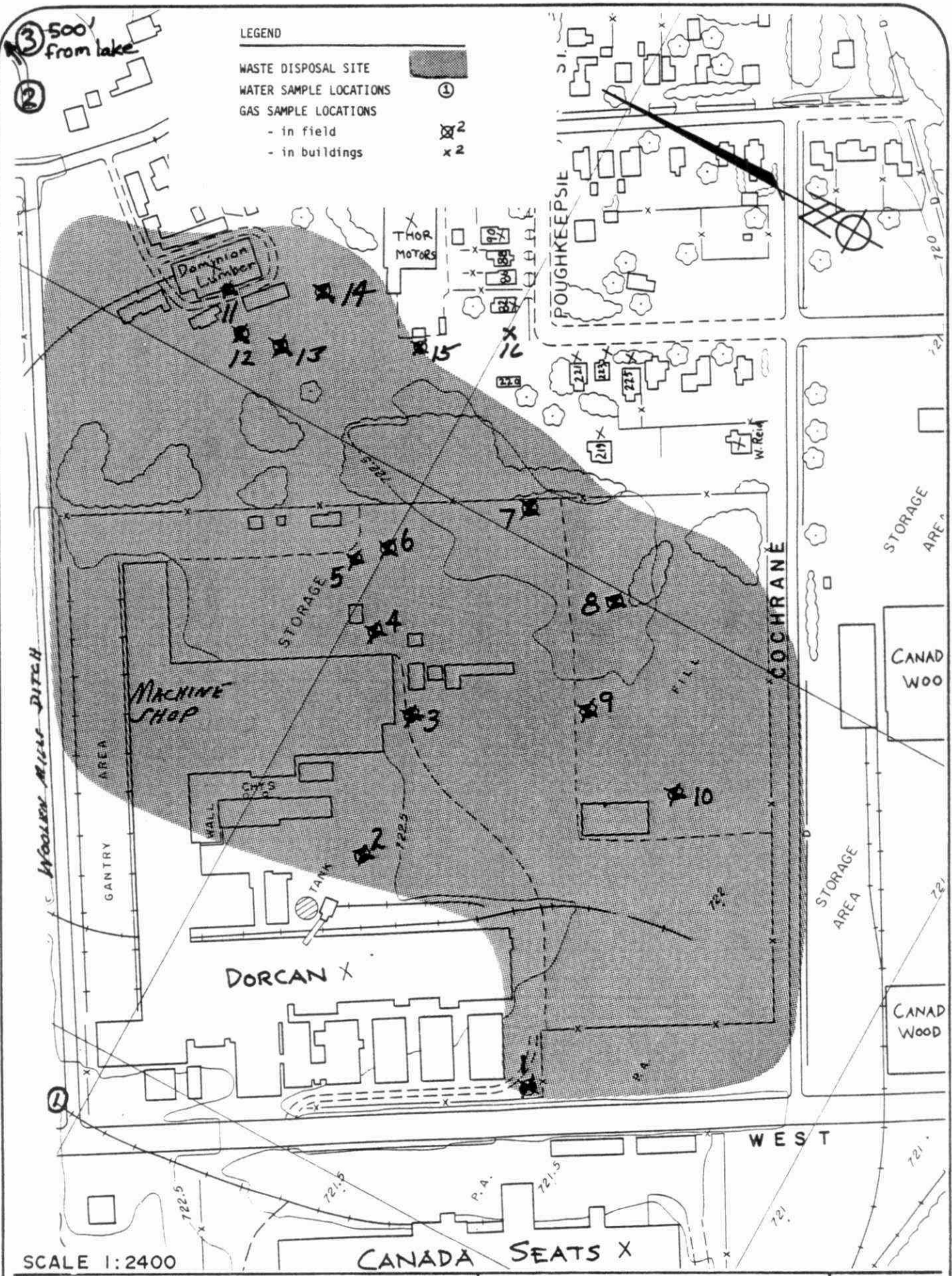
M-141279



SITE NO. 4109  
ORILLIA

Morrison Beatty Limited  
Gore & Storrie Limited

M-221080



SITE NO. 4109  
ORILLIA

Morrison Beatty Limited  
Gore & Storrie Limited





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# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

4109



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

DISPOSAL  
AREA



SCALE 1:6670





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Sept. 29, 30, 1980 SITE IDENTIFICATION CODE 4109

SITE Orillia - Queen near Front  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

| Parameter                  | Results |     |     |   |   |   |   |   |   |    |
|----------------------------|---------|-----|-----|---|---|---|---|---|---|----|
|                            | 1       | 2   | 3   | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides mg/l          | 61      | 52  | 53  |   |   |   |   |   |   |    |
| 2) pH                      | 9       | 7.5 | 8.0 |   |   |   |   |   |   |    |
| 3) Iron mg/l               | 0.6     | 0.6 | 1.1 |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l         | 204     | 221 | 200 |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 320     | 285 | 298 |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

| Parameter           | Results |   |   |   |   |   |   |   |   |    |
|---------------------|---------|---|---|---|---|---|---|---|---|----|
|                     | 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1) Chlorides        |         |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |         |   |   |   |   |   |   |   |   |    |
| 3) Iron             |         |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |         |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |         |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☐ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

| Test  | Results | Test  | Results |
|-------|---------|-------|---------|
| Holes |         | Holes |         |
| #1    | 4.0%    | #6    | 0.25%   |
| #2    | trace   | #7    | 0%      |
| #3    | 0%      | #8    | 0%      |
| #4    | 3.0%    | #9    | 0%      |
| #5    | 5.0%    | #10   | 0%      |

###### D. BUILDINGS

| Name/Address                | Results | Name/Address                   | Results |
|-----------------------------|---------|--------------------------------|---------|
| 1 Canada Seats, West St.    | 0%      | 6. 88 Poughkeepsie St. (house) |         |
| 2 Dorcan, West St.          | 0%      | 7. 86 Poughkeepsie St. (house) |         |
| 3 Dominion Lumber, Gill St. | 0%      | 8. 82 Poughkeepsie St. (house) | 0.9%    |
| 4 Thor Motors, Front St.    | 0%      | 9. 220 Matchedash St. (house)  |         |
| 5 90 Poughkeepsie (house)   | 0%      | 10. 221 Matchedash St. (house) | 0%      |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ 4109 - Page 2

SITE \_\_\_\_\_ Orillia - Queen Near Front con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

B. WELLS WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes

Results

Test

Holes

Results

Name/Address

Results

Name/Address

Results

#11  
#12  
#13  
#14  
#15

0%  
0%  
0%  
1.5%  
0%

#6  
#7  
#8  
#9  
#10

0%

1. 219 Matchedash St. (house)  
2. 223 Matchedash St. (house)  
3. 225 Matchedash St. (house)  
4. W. Reid (store)  
5.

0%  
0%  
0%  
0%

6.  
7.  
8.  
9.  
10.

III General Comments (vegetation, leachate springs, depth, etc.)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clistor



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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4113

Location..... ALLISTON

Morrison Beatty Limited

Gore & Storrie Limited





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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4113

LOCATION King St.

& Victoria St. W.

Alliston

## Background

### Waste Disposal Practices

- Operated by the Town of Alliston for about 4 to 5 years, ending in 1964-1965 for both domestic and clean fill disposal.
- It is estimated that 20,000 cubic metres of material have been placed in the site.
- The site is approximately 1 hectare in area and a maximum of 8 metres deep.
- Information sources were Mr. B. Gauley, Town Administrator, Mr. Stan Tomporowski, Town Superintendent, Mrs. Rhea Alderson, whose residence at #5 King Street is immediately adjacent to the landfill. (She has a number of pictures showing the progress of the fill to its completion.)

### Land Uses

#### Original

- An old river bed meander of the Boyne River - the banks were originally very steep prior to its present gradual grade.

### Present Development

#### On - site

- The site is between private properties and is undeveloped.

#### Abutting

- North - Boyne River.
- West - King Street.
- The Alderson residence, #5 King Street.
- East - Apartment buildings, #66 Elizabeth Street.
- South - Eight single family homes along Victoria Street.

### Present Site Owner

- The west section is owned by Mr. Ralph Hunter, Victoria Street, Alliston.
- The east section is owned by the Town of Alliston.

## Hydrogeologic Setting

### Geology

- regionally, the area is underlain by Lake Algonquin sand deposits
- locally, there may be some recent river deposits of silt, sand and gravel on the floodplain of the Boyne River

### Regional Drainage

- the site abuts the Boyne River
- the upland areas south of the site are serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the refuse was reportedly placed in an old meander of the Boyne River; fill depths range up to 8 m
- the portion of the site located on the Hunter property is maintained with a good quality grass cover; the portion located on Town of Alliston property is rough-cut several times per year

### Topography and Drainage

- the fill surface has been contoured to blend with the natural topography in the area; it slopes gradually from the original stream bank down to the Boyne River
- drainage at the site is excellent



## Identified Impact

### Settlement & Erosion

- there are settlement depressions evident over much of the site
- slumping of the Boyne River banks has occurred along the extent of the site
- subsidence was not noted at any of the abutting homes or the apartment building

### Vegetation Stress

- there are a few patches of decayed vegetation on some parts of the site

### Leachate

- leachate was not observed at this site; however, migration into the underlying permeable sands would be expected
- there was no deterioration in water quality between upstream and downstream sampling points on the Boyne River

### Methane Gas

- methane gas was detected at several locations in the landfill site in concentrations of up to 60% by volume
- no methane gas was found in any of the monitored buildings
- an odour problem was reported by one of the apartment residents, apparently it is evident particularly in November and suggests leakage of landfill gas into the building when the soil cover becomes saturated

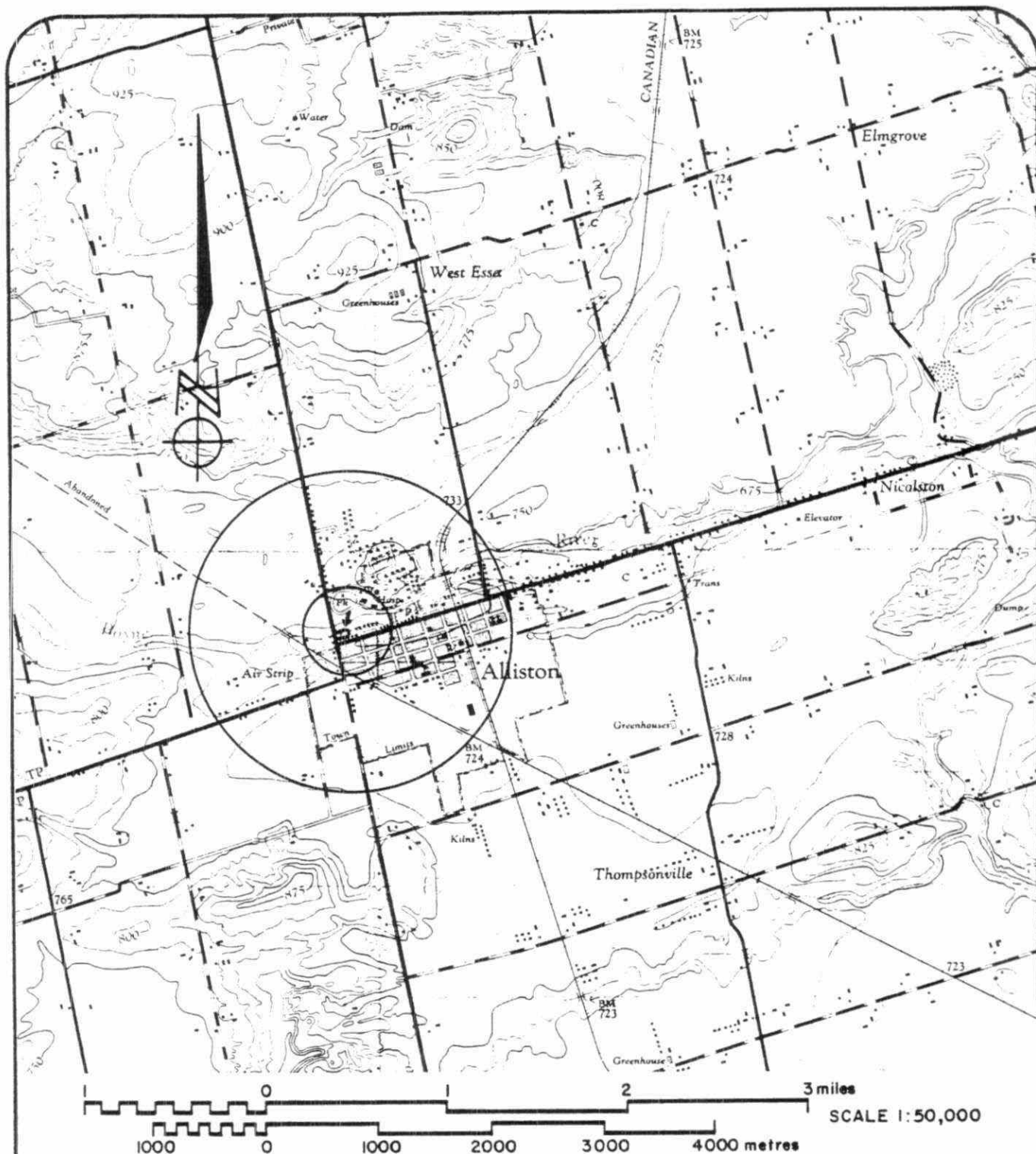
## Potential Impacts

- off-site migration of gas, via the permeable sand deposits, toward the apartment on Elizabeth St and homes on Victoria St.

## Recommendations

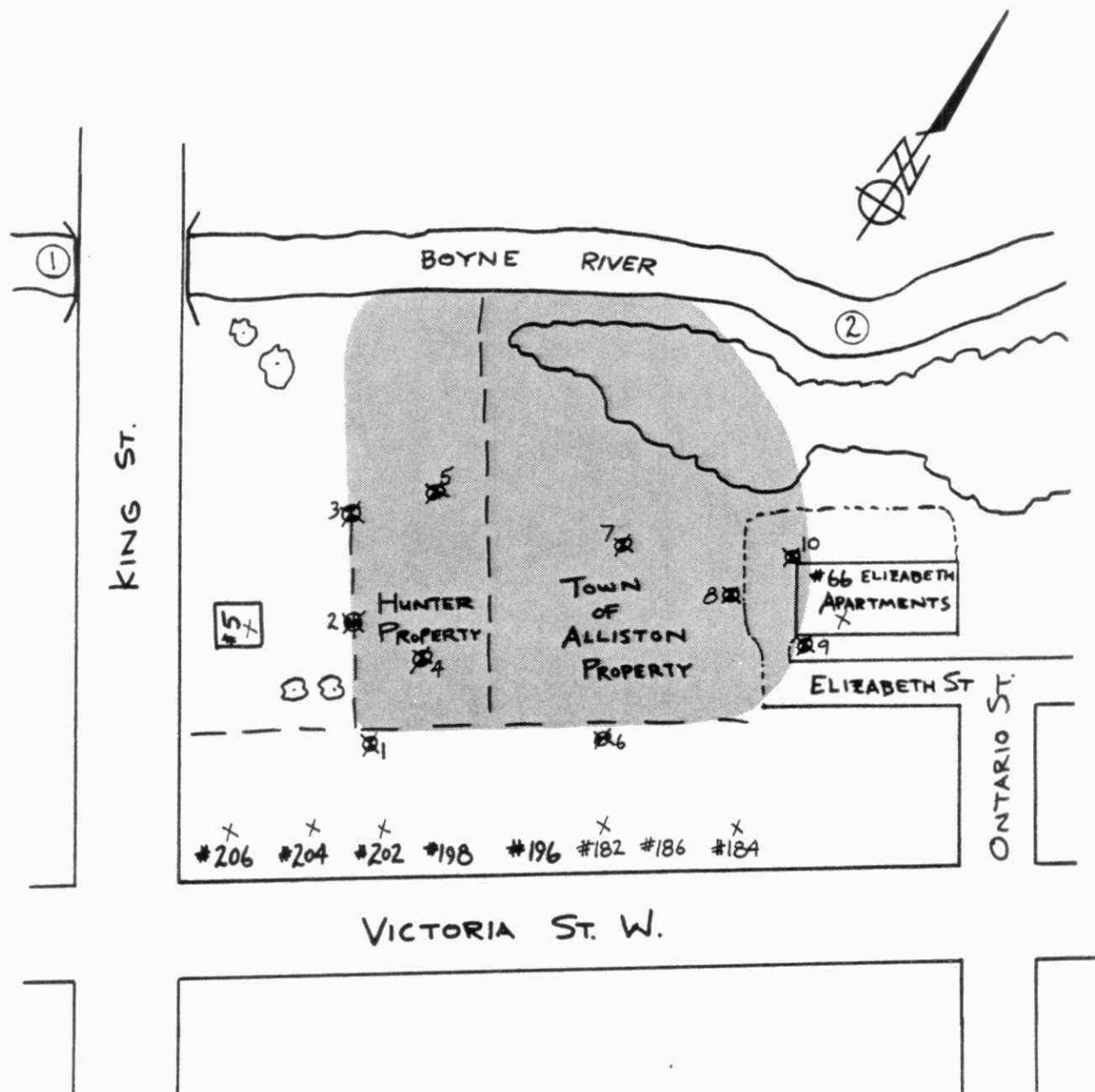
1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact, and
  - iv) minimum buffer zones for future development around the site.
4. The construction history of the apartment at 66 Elizabeth Street should be reviewed. This should include soil investigation reports and plans of foundation design.

| <u>LOCATION</u>                                                 | <u>ESTIMATED<br/>NUMBER</u> |
|-----------------------------------------------------------------|-----------------------------|
| - vicinity of apartment at 66 Elizabeth Street                  | 4                           |
| - backyard areas of abutting homes on Victoria and King Streets | 6                           |



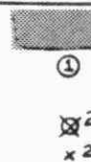
SITE NO. 4113  
ALLISTON

Morrison Beatty Limited  
Gore & Storrie Limited



LEGEND

WASTE DISPOSAL SITE  
 WATER SAMPLE LOCATIONS  
 GAS SAMPLE LOCATIONS  
 - in field  
 - in buildings



NOT TO SCALE

SITE NO. 4113  
 ALLISTON

Morrison Beatty Limited  
 Gore & Storrie Limited



Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

4113



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:3280





Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 2, 1980 SITE IDENTIFICATION CODE 4113

SITE Sr. 15 & Victoria, Alliston  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter

Results

|                                  | 1    | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------------|------|------|---|---|---|---|---|---|---|----|
| 1) Chlorides mg/l                | 30.5 | 30.5 |   |   |   |   |   |   |   |    |
| 2) pH                            | 9.0  | 9.0  |   |   |   |   |   |   |   |    |
| 3) Iron mg/l                     | 0.5  | 0.5  |   |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l               | 192  | 206  |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu\text{mhos}$ | 300  | 290  |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes X No      Comments     

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes      No X If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

| Test  | Results | Test  | Results                               | Name/Address                        | Results | Name/Address                        | Results     |
|-------|---------|-------|---------------------------------------|-------------------------------------|---------|-------------------------------------|-------------|
| Holes |         | Holes |                                       |                                     |         |                                     |             |
| #1    | 0%      | #6    | 0%                                    | 1. 5 King St.                       | 0%      | 6. 182 Victoria St.W.               | 0%          |
| #2    | 0%      | #7    | 60.0%, $\text{O}^-\text{H}_2\text{O}$ | 2. 206 Victoria St.W.               | 0%      | 7. 186 Victoria St.W. (no one home) | 0%          |
| #3    | 0%      | #8    | 0%                                    | 3. 204 Victoria St.W.               | 0%      | 8. 184 Victoria St.W.               | 0%          |
| #4    | 0.5%    | #9    | 0%                                    | 4. 202 Victoria St.W.               | 0%      | 9. 66 Elizabeth St.                 | 0%          |
| #5    | 25.0%   | #10   | 6.0%, $\text{O}^-\text{H}_2\text{O}$  | 5. 198 Victoria St.W. (no one home) | 0%      | 10. <u>    </u>                     | <u>    </u> |

III General Comments (vegetation, leachate springs, depth, etc.)     

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister





Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4115

Location..... COLLINGWOOD  
COUNTY OF SIMCOE

Morrison Beatty Limited

Gore & Storrie Limited



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# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4115

LOCATION

Huron & Niagara Sts.

Collingwood

## Background

### Waste Disposal Practices

- Operated by the Town of Collingwood as a municipal waste disposal site in the 1920's and late 1930's.
- It was closed in 1937, however, it was still used intermittently by the townspeople as late as 1968.
- The site is 2.5 hectares in size with a very shallow depth. Bedrock is encountered at 1 to 1.5 metres.
- Information sources were Mr. Don Leonard, Public Works Superintendent, Town of Collingwood; Mr. Ed Cooper, resident, Napier Place Apartments.

### Land Uses

**Original** - Undeveloped open space.

### Present Development

**On - site**

- Napier Place (senior citizens apartments)
- For the most part, undeveloped vacant space. (It would be difficult to use for development.)

**Abutting**

- North - Huron Street.
- East - 10 single family residences on Niagara Street.
- West - 11 single family residences on Rodney Street.
- South - 8 single family residences on Simcoe Street.

### Present Site Owner

- Town of Collingwood.

## Hydrogeologic Setting

### Geology

- the general area is underlain by lithographic limestone of the Lindsay Formation; the bedrock outcrops just east of the fill site
- locally, the bedrock may be overlain by this glaciolacustrine sands

### Regional Drainage

- the site is located in a former wetlands area near the shore of Georgian Bay
- the entire area surrounding the fill site is serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the purpose of this disposal site was to reclaim a wetland area for residential development
- the fill is very shallow (1-2 m)
- much of the site is now treed and maintained by the owners

### Topography and Drainage

- the surface of the site slopes slightly to the northwest; total relief is about 0.5 m
- an intermittent stream rises near the southeast corner of the site
- drainage is only fair, due to the flat surface and high water table

## Identified Impact

### Settlement & Erosion

- settlement of up to 15 cm was noted near the Napier Place apartments;
- settlement depressions occur over the extent of the site
- erosion has not occurred at this site

### Vegetation Stress

- there are a few areas of vegetation stress which may indicate the presence of methane gas; these areas are not extensive

### Leachate

- there is no evidence of leachate seepage at any location at this landfill site
- water quality has not deteriorated measurably between upstream and downstream sampling points

### Methane Gas

- no methane gas was detected in the landfill or on adjacent properties
- monitoring of buildings in the vicinity did not produce any indication of methane migration or accumulation in the homes or apartment building

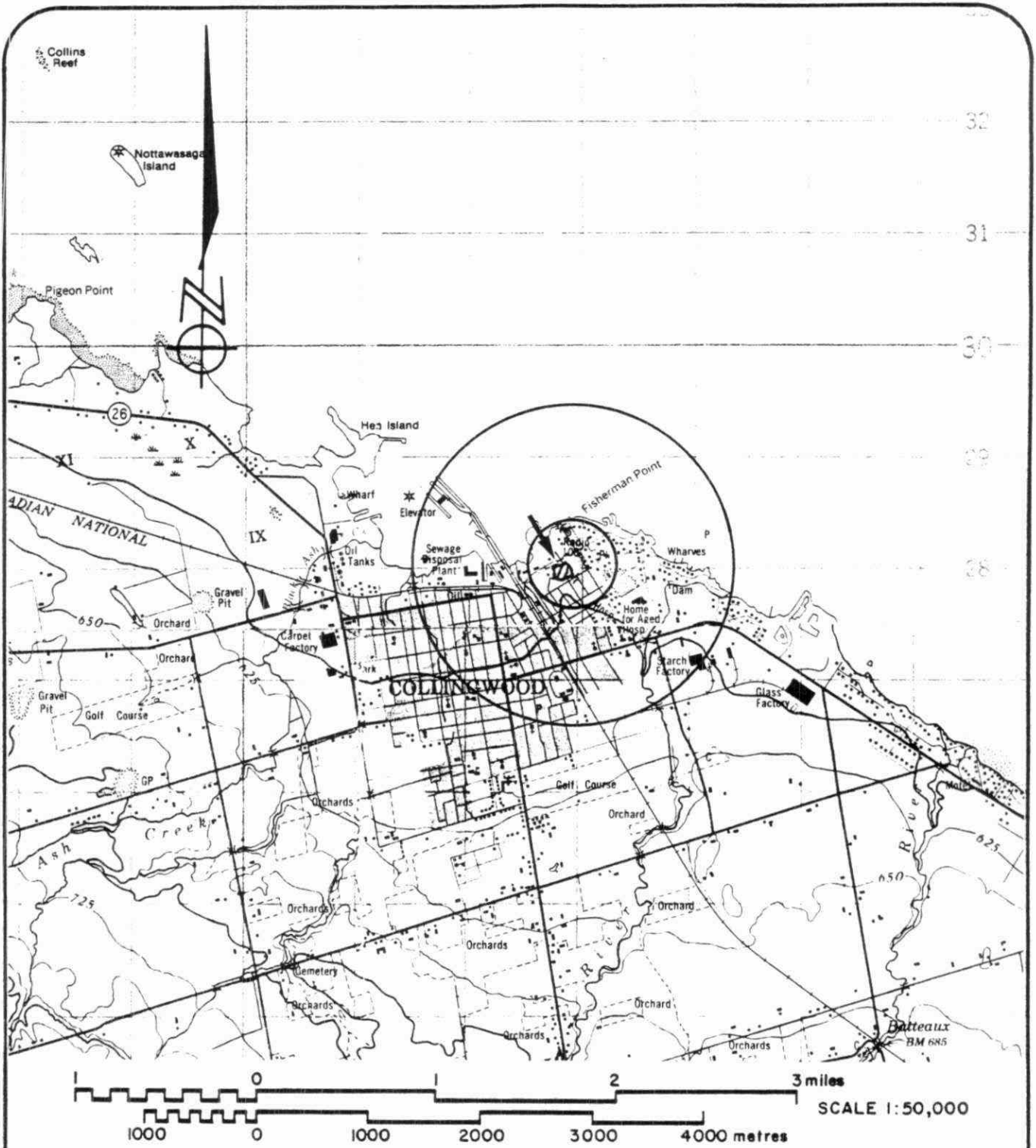
## Potential Impacts

- the age of the disposal site (> 40 yrs), the lack of significant quantities of organic wastes in pre-World War II sites, the shallow depth of fill (< 2 m), and the construction of residential buildings on the site indicate there are no impacts from this site

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around the site.
2. No further studies are required.

M-141270

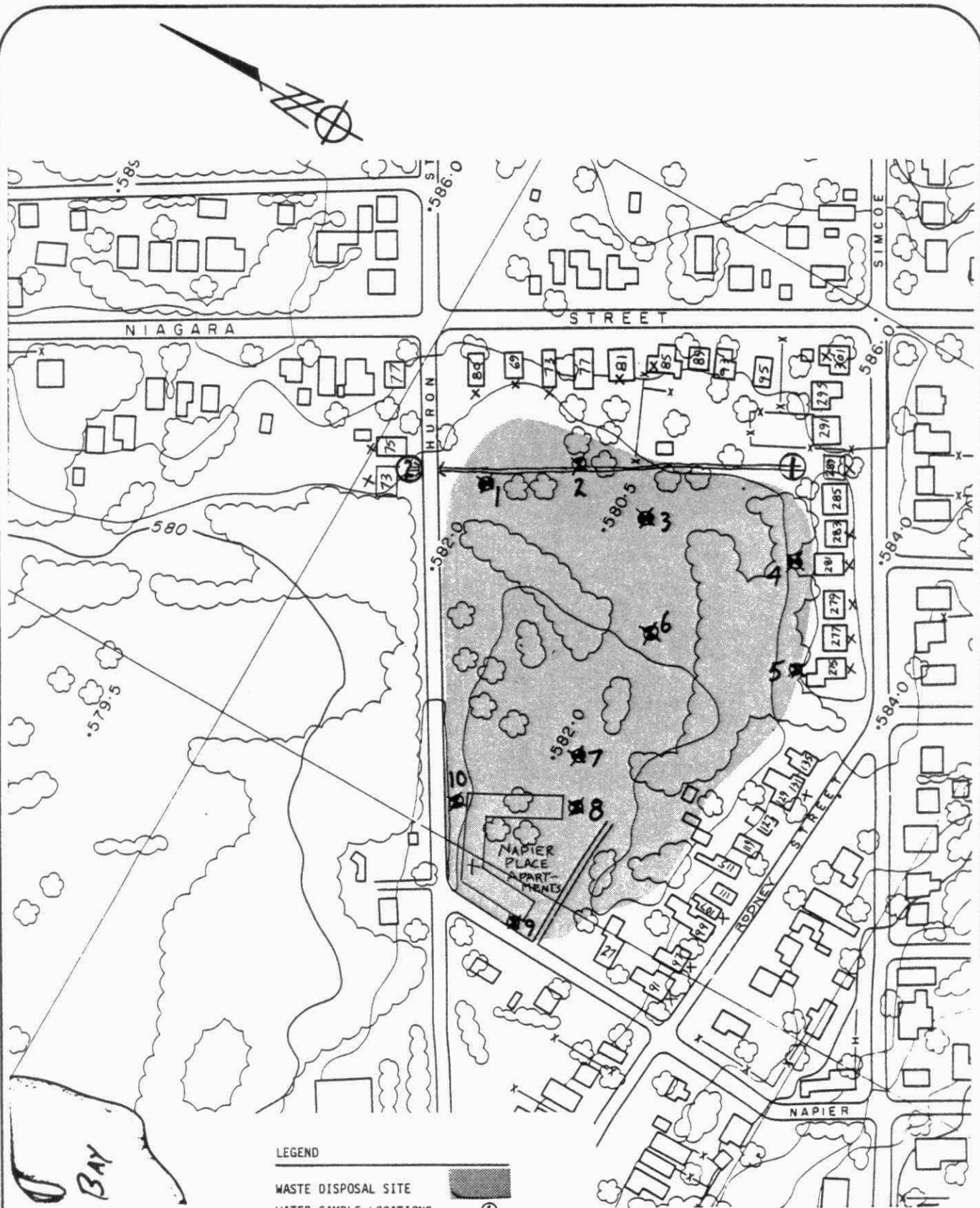


SITE NO. 4115  
COLLINGWOOD

Morrison Beatty Limited  
Gore & Storrie Limited



M-221080



LEGEND

- WASTE DISPOSAL SITE
- WATER SAMPLE LOCATIONS
- GAS SAMPLE LOCATIONS
  - in field
  - in buildings



SCALE 1:2400

SITE NO. 4115  
COLLINGWOOD

Morrison Beatty Limited  
Gore & Storrie Limited



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Ontario

# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

4115



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





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(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Oct. 2, 1980 SITE IDENTIFICATION CODE 4115

SITE Huron & Niagara, Collingwood  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

Parameter

Results

|                            | 1    | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|------|------|---|---|---|---|---|---|---|----|
| 1) Chlorides mg/l          | 30.5 | 30.5 |   |   |   |   |   |   |   |    |
| 2) pH                      | 9.0  | 9.0  |   |   |   |   |   |   |   |    |
| 3) Iron mg/l               | 0.44 | 0.4  |   |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l         | 150  | 113  |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 284  | 218  |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

Parameter

Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☐ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

Test

Holes Results

|    |    |
|----|----|
| #1 | 0% |
| #2 | 0% |
| #3 | 0% |
| #4 | 0% |
| #5 | 0% |

Test

Holes Results

|     |    |
|-----|----|
| #6  | 0% |
| #7  | 0% |
| #8  | 0% |
| #9  | 0% |
| #10 | 0% |

###### D. BUILDINGS

Name/Address

|                                       |    |
|---------------------------------------|----|
| 1. 73 Huron St. (house)               | 0% |
| 2. 75 Huron St. (house)               | 0% |
| 3. 77 Huron St. (house) (no one home) | 0% |
| 4. 80 Huron St. (house)               | 0% |
| 5. 69 Niagara St. (house)             | 0% |

Results

Name/Address

|                                          |    |
|------------------------------------------|----|
| 6. 73 Niagara St. (house)                | 0% |
| 7. 77 Niagara St. (house) (no one home)  | 0% |
| 8. 81 Niagara St. (house)                | 0% |
| 9. 85 Niagara St. (house)                | 0% |
| 10. 89 Niagara St. (house) (no one home) | 0% |

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 4115 - Page 2

SITE Huron & Niagara, Collingwood con't.  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes

Results

Test

Holes

Results

Name/Address

Results

Name/Address

Results

#1  
#2  
#3  
#4  
#5

#6  
#7  
#8  
#9  
#10

1. 93 Niagara St. (house) (no one home)  
2. 95 Niagara St. (house) (no one home)  
3. 301 Simcoe St. (house) 0%  
4. 295 Simcoe St. (house) (no one home)  
5. 291 Simcoe St. (house) (no one home)

6. 289 Simcoe St. (house)  
7. 285 Simcoe St. (house)  
8. 283 Simcoe St. (house)  
9. 281 Simcoe St. (house)  
10. 279 Simcoe St. (house)

0%  
  
  
0%  
0%  
0%

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister





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Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 4115 - Page 3

SITE Huron & Niagara, Collingwood con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

###### Test

Holes Results

###### Test

Holes Results

###### Name/Address

###### Results

###### Name/Address

###### Results

|    |  |     |  |                                         |    |                                         |    |
|----|--|-----|--|-----------------------------------------|----|-----------------------------------------|----|
| #1 |  | #6  |  | 1. 277 Simcoe St. (house)               | 0% | 6. 119 Rodney St. (house)               |    |
| #2 |  | #7  |  | 2. 275 Simcoe St. (house)               | 0% | 7. 115 Rodney St. (house)               |    |
| #3 |  | #8  |  | 3. 135 Rodney St. (house) (no one home) |    | 8. 111 Rodney St. (house)               |    |
| #4 |  | #9  |  | 4. 129/131 Rodney St. (house)           | 0% | 9. 107 Rodney St. (house)               | 0% |
| #5 |  | #10 |  | 5. 127 Rodney St. (house) (no one home) |    | 10. 99 Rodney St. (house) (no one home) |    |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 4115 - Page 4

SITE Huron & Niagara, Collingwood con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Test

Holes

Results

Holes

Results

Name/Address

Results

Name/Address

Results

#1  
#2  
#3  
#4  
#5

#6  
#7  
#8  
#9  
#10

1. 97 Rodney St. (house) 0%  
2. 91 Rodney St. (house) 0%  
3. 27 Napier St. (house) (no one home)  
4. Napier Place (apts.) 0%  
5. \_\_\_\_\_

6.  
7.  
8.  
9.  
10.

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister





Ontario

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Environment

# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4128

Location..... WESTERN & WEST  
ORILLIA  
COUNTY OF SIMCOE

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

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of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4128

LOCATION

West & King Streets

Orillia

## Background

### Waste Disposal Practices

- Wastes deposits are from a coal and lumber retail outlet which at one time existed on the site.
- It operated in the late 1940's and closed in 1950.
- The site is approximately 1 hectare in size and the depth of fill is reportedly 1 metre deep.
- Information sources were Mr. Jack Hunter, City of Orillia, Works Department; Mr. Philip Hope, Manager of the A&P store; various local residents.

### Land Uses

#### Original

- The site was originally a coal and lumber retail outlet ran by the Sargeant Co.
- Local residents also recall that there was a tannery located at the present front of the A&P store, adjacent to West Street.

### Present Development

#### On - site

- A&P grocery store and paved parking lot.

#### Abutting

- North - Western Avenue and two private residences.
- East - Peter Street and four private residences.
- West - West Street.
- South - King Street and Beaver Lumber store.

### Present Site Owner

- Great Atlantic & Pacific Trading Co. Ltd.  
5559 Dundas Street West, Etobicoke, Ontario.

## Identified Impact

### Settlement & Erosion

- extensive settling and subsidence has occurred in the paved parking lot in front of the A & P store, adjacent to West Street
- minor cracking of the asphalt surface was noted between the A & P store and Peter Street

### Vegetation Stress

- the entire landfill site has been utilized for the A & P building and the store's parking lot area; vegetation is non-existent

### Leachate

- there was no evidence of leachate at this site

### Methane Gas

- a maximum concentration of 15% methane gas was recorded in a barhole driven into the A & P parking lot; and at three additional locations in the landfill site
- no combustible gas was detected in any residence other than a trace indication at the foot of an interior basement wall at 109 Peter Street

## Potential Impacts

- gas migration into subsurface levels of the on-site A & P store

## Hydrogeologic Setting

### Geology

- regionally, the site is situated in sand deposits of post-glacial Lake Algonquin

### Regional Drainage

- drainage of the area is east to Lake Couchiching via Woollen Mills Ditch which is about 130 m to the south of the landfill site

## Disposal Site Detail

### Fill Characteristics

- fill was placed in a minor depression which existed after the saw mill and tannery, formerly located on the site, were demolished; the fill depth is therefore shallow
- the entire surface of the site is paved or has commercial buildings on it

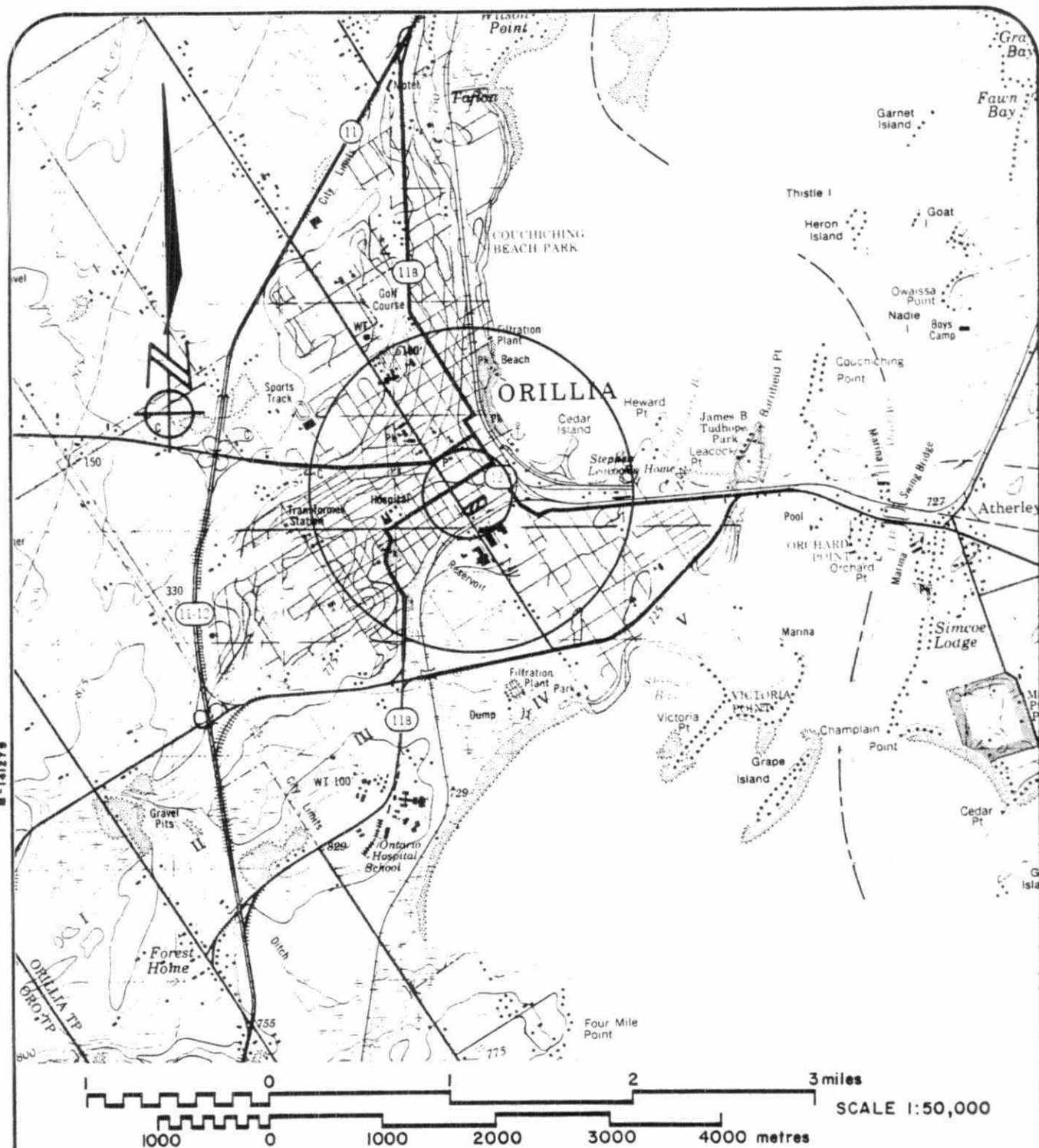
### Topography and Drainage

- the site is generally flat; drainage is to the south into Woollen Mills Ditch

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.

| <u>LOCATION</u>                                                               | <u>ESTIMATED<br/>NUMBER</u> |
|-------------------------------------------------------------------------------|-----------------------------|
| - around the perimeter of the A&P Store on<br>Weston Avenue                   | 6                           |
| - in the backyards of the properties of 105,<br>107, 109 and 111 Peter Street | 4                           |



SITE NO. 4128  
ORILLIA

Morrison Beatty Limited  
Gore & Storrie Limited



M-221080



LEGEND

- WASTE DISPOSAL SITE 
- WATER SAMPLE LOCATIONS ①
- GAS SAMPLE LOCATIONS
  - in field  2
  - in buildings x 2

SCALE 1:2400

**SITE NO. 4128**  
**ORILLIA**

**Morrison Beatty Limited**  
**Gore & Storrie Limited**



Ministry  
of the  
Environment

Ontario

# OLD WASTE DISPOSAL SITE STUDY

**SITE NO.**

4128



**Morrison Beatty Limited**  
**Gore & Storrie Limited**

DISPOSAL  
AREA



SCALE 1:6670





Ministry  
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Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Sept. 29, 1980 SITE IDENTIFICATION CODE 4128  
SITE Western & West St., Orillia  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes ☐ No ☒ Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### D. BUILDINGS

###### Test

###### Test

###### Holes

###### Results

###### Holes

###### Results

###### Name/Address

###### Results

###### Name/Address

###### Results

- |    |                               |     |                              |
|----|-------------------------------|-----|------------------------------|
| #1 | 0%, 0.01"H <sub>2</sub> O     | #6  | 14.0%, 0                     |
| #2 | 0%, 0.01"H <sub>2</sub> O     | #7  | 0.0%, 0.015"H <sub>2</sub> O |
| #3 | 0%, 0                         | #8  | trace, 0                     |
| #4 | 0.5%, 0                       | #9  | 0, 0                         |
| #5 | 15.0%, 0.015"H <sub>2</sub> O | #10 | 0, 0                         |

- |                                    |               |                           |               |
|------------------------------------|---------------|---------------------------|---------------|
| 1. Beaver Lumber, King St. (store) | 0%            | 6. 105 Peter St. (house)  | (no one home) |
| 2. A&P, King (store)               | 0%            | 7. 103 Peter St. (house)  | (no one home) |
| 3. 111 Peter St. (house)           | (no one home) | 8. 89 Peter St. (offices) | 0%            |
| 4. 109 Peter St. (house)           | 0%            | 9. 85 Peter St. (house)   | (no one home) |
| 5. 107 Peter St. (house)           | 0%            | 10. 81 Peter St. (house)  | (no one home) |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ 4128 - Page 2

SITE \_\_\_\_\_ Western & West St., Orillia con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes

Results

Test

Holes

Results

Name/Address

Results

Name/Address

Results

- #11
- #2
- #3
- #4
- #5

0, 0

- #6
- #7
- #8
- #9
- #10

1. 33 Elgin St. (house) (no one home)
2. 31 Elgin St. (house) (no one home)
3. 27 Elgin St. (house) 0%
4. 23 Elgin St. (house) 0%
5. 21 Elgin St. (house) (no one home)

6. 19 Elgin St. (house) (no one home)
7. 17 Elgin St. (house) (no one home)
8. 15 Elgin St. (house) (no one home)
9. 11 Elgin St. (house) (no one home)
10. 9 Elgin St. (house) 0%

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: \_\_\_\_\_ Wm. E. Clister





Ministry  
of the  
Environment  
Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ 4128 - Page 3

SITE Western & West St., Orillia con't  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

##### I Leachate

###### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

###### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

##### II Gas

###### C. ON-SITE

###### Test

###### Holes

###### Results

- #1
- #2
- #3
- #4
- #5

###### Test

###### Holes

###### Results

- #6
- #7
- #8
- #9
- #10

###### D. BUILDINGS

###### Name/Address

###### Results

1. 3 Elgin St. (house) (no one home)
2. 88 King St. (house) 0%
3. 92 King St. (house) 0%
4. \_\_\_\_\_
5. \_\_\_\_\_

###### Name/Address

###### Results

6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister

D I S T R I C T      O F      M U S K O K A

4209

HUNTSVILLE





Ontario

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# OLD WASTE DISPOSAL SITE STUDY

Site Number... 4209

Location..... HUNTSVILLE  
DISTRICT OF MUSKOKA

Morrison Beatty Limited

Gore & Storrie Limited



Ontario

Ministry  
of the  
Environment

# OLD WASTE DISPOSAL SITE STUDY

SITE NO. 4209

LOCATION

A&P Parking Lot

Huntsville

## Background

### Waste Disposal Practices

- Operated by the Town of Huntsville for approximately 40 years as an open municipal dump for the local area until about 1939.
- The site was closed in the mid 1960's.
- The waste reportedly consists of domestic wastes, saw mill fines, metal refuse and old derelict vehicles.
- The site is approximately 11 hectares in size.
- The landfill depth is unknown.
- The A&P store is supported on piles.
- Information sources were Mr. C. Chataway, Huntsville Public Works Superintendent, Mr. Jim Bloomfield, Manager of the A&P store.

### Land Uses

#### Original

- The land was originally a low lying swamp area.
- A flood plain for the adjacent river that flows from Hunter's Bay.

### Present Development

#### On - site

- The A&P Plaza with its paved parking lot occupies the centre of the landfill area.
- There are commercial buildings located around the perimeter of the site.
- Three private residences along Chaffey Street.

#### Abutting

- North - Cann Street and the Brendale Shopping Plaza.
- East - Chaffey Street.
- West - John Street.
  - Private residence, #3 John Street.
  - Marina and vacation rental cabins.
- South - Main Street.

### Present Site Owner

- There are reportedly several owners of the various commercial buildings on site. Some owners include Messrs. Seagram, and Peters as well as a Mr. Solomon of 85 Richmond Street, Huntsville.

## Hydrogeologic Setting

### Geology

- regionally the entire area is underlain by granitic Precambrian bedrock
- locally, in the vicinity of the fill site, there is a deep (up to 30 m) bedrock depression which contains clay and sand overburden; the clay is probably varved and is encountered in the upper 14 to 19 m

### Regional Drainage

- the site is located in a lowland area along the Muskoka River
- the entire upland area north, east and south of the site is serviced by storm sewers

## Disposal Site Detail

### Fill Characteristics

- the disposal site is located in a low-lying swampy area
- the depth of waste averages about 2 m and the entire surface has been paved or built-on

### Topography and Drainage

- the surface of the parking lot is relatively flat, with drainage directed to storm sewer manholes
- while the pavement prevents infiltration into the site, it appears there may be groundwater "flow through" in the refuse from upland recharge

## Identified Impact

### Settlement & Erosion

- depressions, cracks in pavement and minor cracks in foundations indicate significant settlement of the waste material in the landfill site
- there is no evidence of erosion occurring at the site

### Vegetation Stress

- the entire landfill area has been developed into a commercial plaza, the front parking lot and rear service area are paved; vegetation is nearly non-existent

### Leachate

- leachate was observed flowing from a culvert which traverses the site; the analysis indicates that the downstream water has significantly higher readings of all parameters than the upstream analysis

### Methane Gas

- methane gas concentrations of 69% were found beneath the pavement within 30 m of the A & P store; there was a positive gas pressure of 10 mm water gauge beneath the pavement
- methane gas was recorded at several other locations in the landfill site
- monitoring of crawl spaces beneath commercial buildings and the residences in the vicinity indicated no detectable methane concentrations

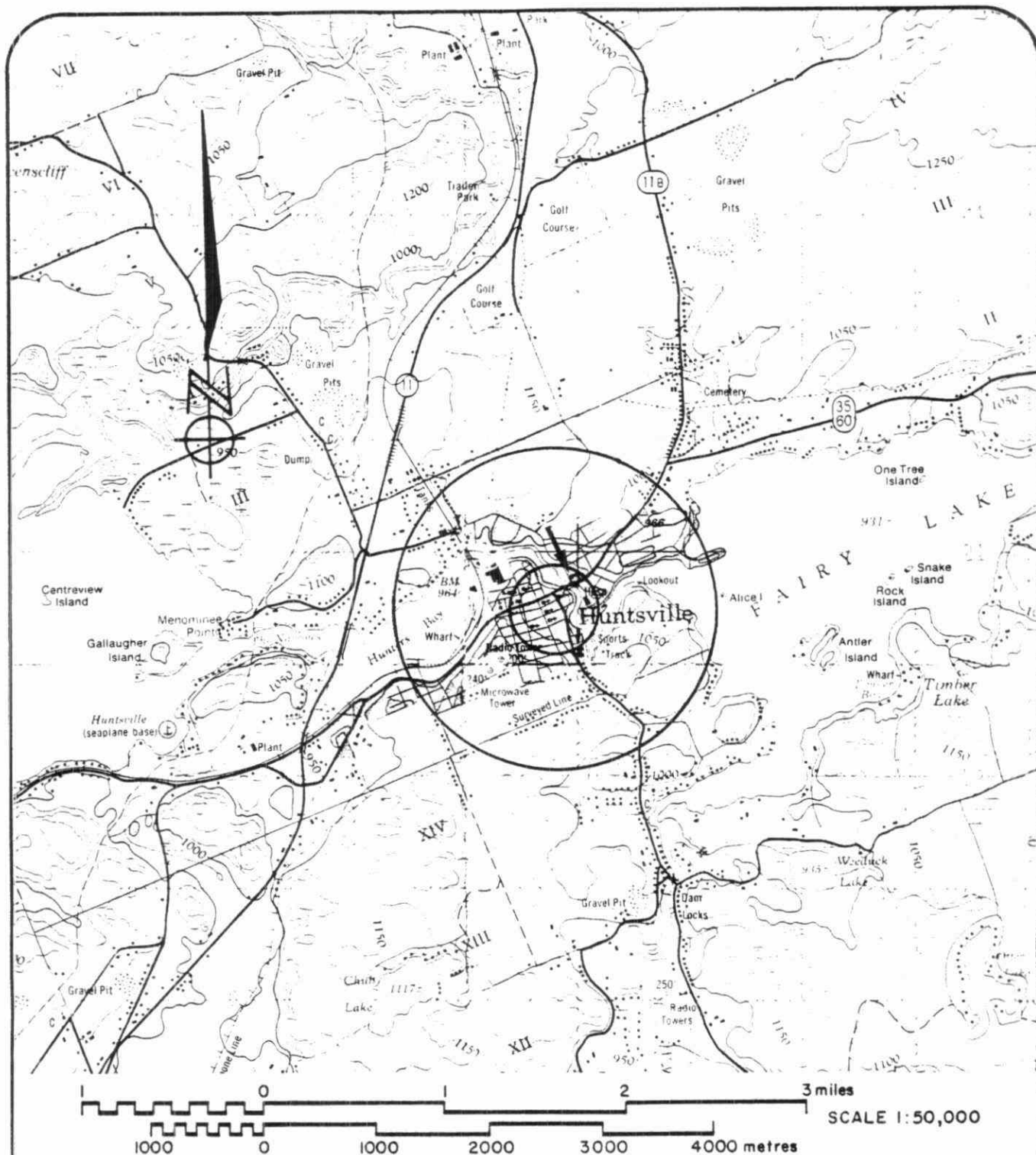
## Potential Impacts

- gas migration into subsurface levels of on-site buildings

## Recommendations

1. The disposal site and future uses should be permanently identified as follows:
  - (a) identify the "limits of fill" on the Official Plan,
  - (b) amend the Zoning By-law for the disposal site to restrict future uses,
  - (c) register a Notice on the title of the property with the Land Registrar which identifies the disposal site, the potential impacts and the restricted future uses,
  - (d) prohibit future residential development on the disposal site and a limited buffer zone around this site.
2. The Part II study should be carried out to assess the potential impacts. The study should include the following:
  - i) installation of multi-depth gas probes as set out in the Table below,
  - ii) monitoring of gas probes for methane concentration and ground and atmospheric air pressure every two weeks from November to May, and
  - iii) monitoring of methane gas in abutting buildings if the concentration in the ground outside the foundation exceeds 5% by volume.
3. The results of the monitoring program should be assessed to determine:
  - i) if monitoring can be terminated, in the event of no apparent hazard,
  - ii) if monitoring should be continued, in the event of an identified potential hazard,
  - iii) if permanent gas controls should be installed, in the event of a hazardous impact,
  - iv) minimum buffer zones for future development around the site.
4. The construction history of on-site and near-site buildings should be reviewed. The following should be examined:
  - i) soil investigation reports,
  - ii) reports of waste materials encountered during construction,
  - iii) plans of foundation design,
  - iv) details of special gas control systems, if any, and
  - v) details of gas monitoring program, if any.
5. A comprehensive analysis of leachate collected from the identified seepage points should be conducted.

| <u>LOCATION</u>                                                                                           | <u>ESTIMATED<br/>NUMBER</u> |
|-----------------------------------------------------------------------------------------------------------|-----------------------------|
| - periphery of A&P Store, attached plaza and<br>Brewers Retail/Bank of Montreal buildings                 | 10                          |
| - backyard areas of abutting homes on Chaffey<br>Street                                                   | 3                           |
| - parking areas at rear of abutting Commercial<br>buildings on Main Street, including the Esso<br>Station | 5                           |



SITE NO. 4209  
HUNTSVILLE

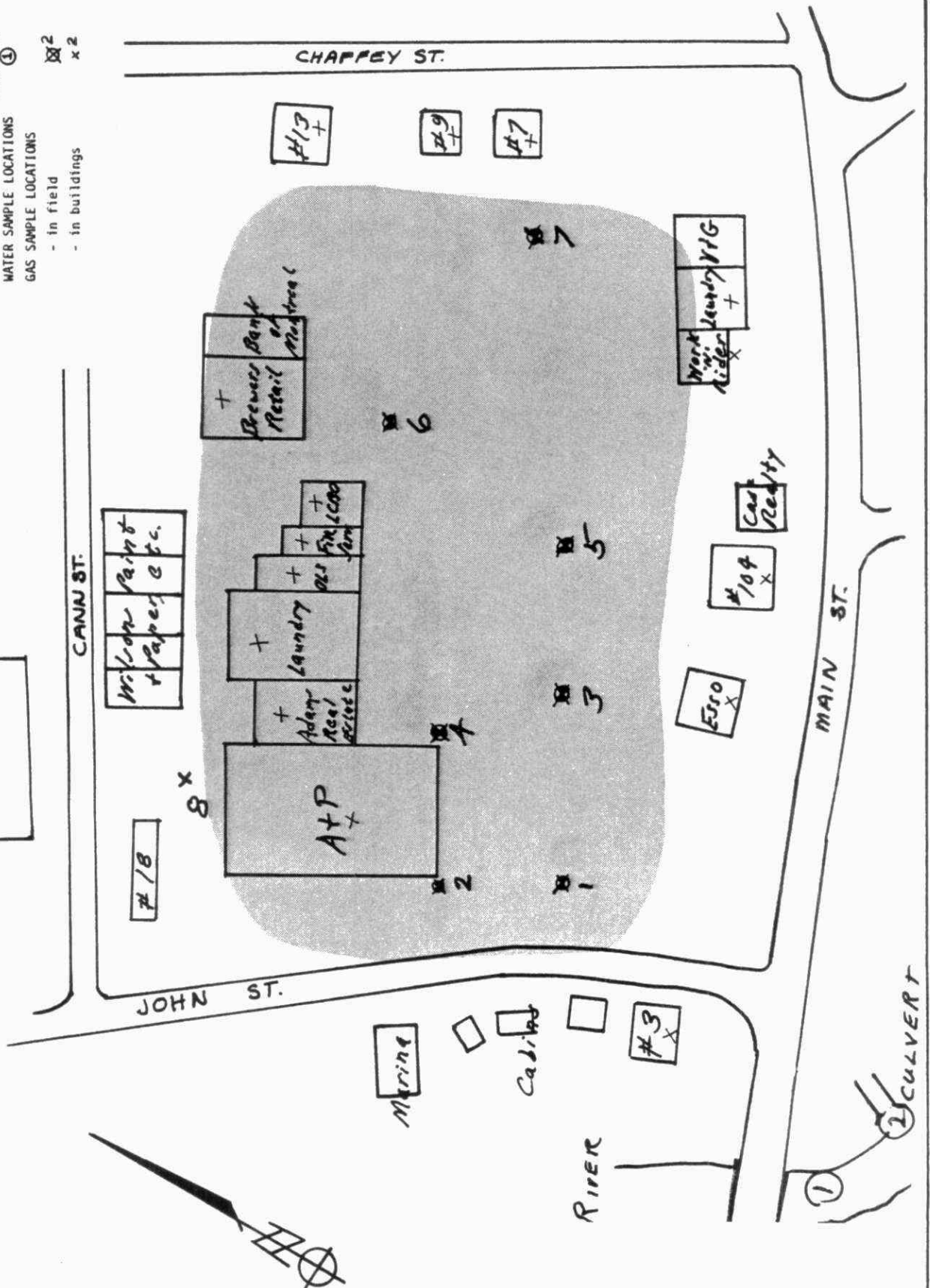
Morrison Beatty Limited  
Gore & Storrie Limited



Brendale Square

LEGEND

- ①  
WASTE DISPOSAL SITE  
WATER SAMPLE LOCATIONS  
GAS SAMPLE LOCATIONS  
- in field  
- in buildings
- ②  
x 2



SCALE 1:2400

SITE NO. 4209  
HUNTSVILLE

Morrison Beatty Limited  
Gore & Storrie Limited



Ontario

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# OLD WASTE DISPOSAL SITE STUDY

SITE NO.

4209



Morrison Beatty Limited  
Gore & Storrie Limited

DISPOSAL  
AREA



SCALE 1:4500





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Ontario

(To be completed in duplicate, 1 copy to MOE Regional office, 1 copy to MOE Head office)

FORM I  
(Site Identification Study)

### SITE INSPECTION

MOE REGION CENTRAL REGION DATE Sept. 30, 1980 SITE IDENTIFICATION CODE 4209  
SITE Main St., Huntsville  
(Lot, concession #, or UTM coordinates, name, address)

#### ON-SITE TESTS

#### I Leachate

##### A. WATER BODIES WITHIN 100 METRES

###### Parameter

###### Results

|                            | 1    | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|------|-----|---|---|---|---|---|---|---|----|
| 1) Chlorides mg/l          | 15.0 | 128 |   |   |   |   |   |   |   |    |
| 2) pH                      | 6.4  | 9.0 |   |   |   |   |   |   |   |    |
| 3) Iron mg/l               | 0.6  | 3.9 |   |   |   |   |   |   |   |    |
| 4) Alkalinity mg/l         | 17   | 245 |   |   |   |   |   |   |   |    |
| 5) Conductivity $\mu$ mhos | 39   | 600 |   |   |   |   |   |   |   |    |

##### B. WELLS WITHIN 100 METRES

###### Parameter

###### Results

|                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|---|---|---|---|---|---|---|---|---|----|
| 1) Chlorides        |   |   |   |   |   |   |   |   |   |    |
| 2) Dissolved solids |   |   |   |   |   |   |   |   |   |    |
| 3) Iron             |   |   |   |   |   |   |   |   |   |    |
| 4) Alkalinity       |   |   |   |   |   |   |   |   |   |    |
| 5) Conductivity     |   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes ☐ No ☐ Comments \_\_\_\_\_

#### LAB TESTS (2 LITRE SAMPLES)

Required, Yes ☐ No ☒ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

#### II Gas

##### C. ON-SITE

###### Test

###### Holes

###### Results

|    |                          |
|----|--------------------------|
| #1 | 4.0%                     |
| #2 | 0%                       |
| #3 | 69.0% & 0.42"            |
| #4 | 0%                       |
| #5 | 9.0%, 0"H <sub>2</sub> O |

###### Test

###### Holes

###### Results

|     |                           |
|-----|---------------------------|
| #6  | 0.5%                      |
| #7  | 34.0%, 0~H <sub>2</sub> O |
| #8  | 0%                        |
| #9  |                           |
| #10 |                           |

##### D. BUILDINGS

###### Name/Address

###### Results

|                                 |    |
|---------------------------------|----|
| 1. A&P Store                    | 0% |
| 2. Adam's Real Estate           | 0% |
| 3. Peter's Coin Laundry         | 0% |
| 4. Beacom Land Surveyors        | 0% |
| 5. Associate Financial Services | 0% |

###### Name/Address

###### Results

|                           |        |
|---------------------------|--------|
| 6. L.C.B.O.               | 0%     |
| 7. Brewer's Retail        | 0%     |
| 8. Bank of Montreal       | closed |
| 9. 13 Chaffey St. (house) | 0%     |
| 10. 9 Chaffey St. (house) | 0%     |

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE \_\_\_\_\_ 4209 - Page 2

SITE Main St., Huntsville con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

B. WELLS WITHIN 100 METRES

Parameter

Results

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Holes Results

#1 \_\_\_\_\_  
#2 \_\_\_\_\_  
#3 \_\_\_\_\_  
#4 \_\_\_\_\_  
#5 \_\_\_\_\_

Test

Holes Results

#6 \_\_\_\_\_  
#7 \_\_\_\_\_  
#8 \_\_\_\_\_  
#9 \_\_\_\_\_  
#10 \_\_\_\_\_

Name/Address

1. 7 Chaffey St. (house) 0%  
2. Victoria & Grey Trust, Main closed  
3. Martin Coin Laundry, Main 0%  
4. Work N'Rider, Main 0%  
5. Case Reality Ltd., Main closed

Results

Name/Address

6. 104 Main St., Riteway Cleaners 0%  
7. 100 Main St., Esso Service 0%  
8. 3 John St. (house) 0%  
9. Cabins (3) closed  
10. Marina, John Street closed

Results

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

(Detail all test point locations in a sketch on reverse side)

Form completed by: Wm. E. Clister



SITE INSPECTION

MOE REGION \_\_\_\_\_ DATE \_\_\_\_\_ SITE IDENTIFICATION CODE 4209 - Page 3

SITE Main St., Huntsville con't  
(Lot, concession #, or UTM coordinates, name, address)

ON-SITE TESTS

I Leachate

A. WATER BODIES WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

B. WELLS WITHIN 100 METRES

Parameter

Results

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

- 1) Chlorides
- 2) Dissolved solids
- 3) Iron
- 4) Alkalinity
- 5) Conductivity

Any significant odour problems Yes \_\_\_\_\_ No \_\_\_\_\_ Comments \_\_\_\_\_

LAB TESTS (2 LITRE SAMPLES)

Required, Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, complete Form II, Lab Analysis. If No, go to Part II, Gas.

II Gas

C. ON-SITE

D. BUILDINGS

Test

Test

Holes Results

Holes Results

Name/Address

Results

Name/Address

Results

#1  
#2  
#3  
#4  
#5

#6  
#7  
#8  
#9  
#10

1. 18 Cann St., Nina's Sewing  
2. Wilson's Paint & Paper  
3. Hidden Valley Travel  
4. Windmill Bakery  
5. Anthony's Hair Place

0%  
0%  
in the  
sanitary  
holding  
tank

6. Chesterfields Fish & Chips  
7.  
8.  
9.  
10.

III General Comments (vegetation, leachate springs, depth, etc.) \_\_\_\_\_

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**1980**  
vol 2

Old waste disposal site studies ;  
central region.  
76890